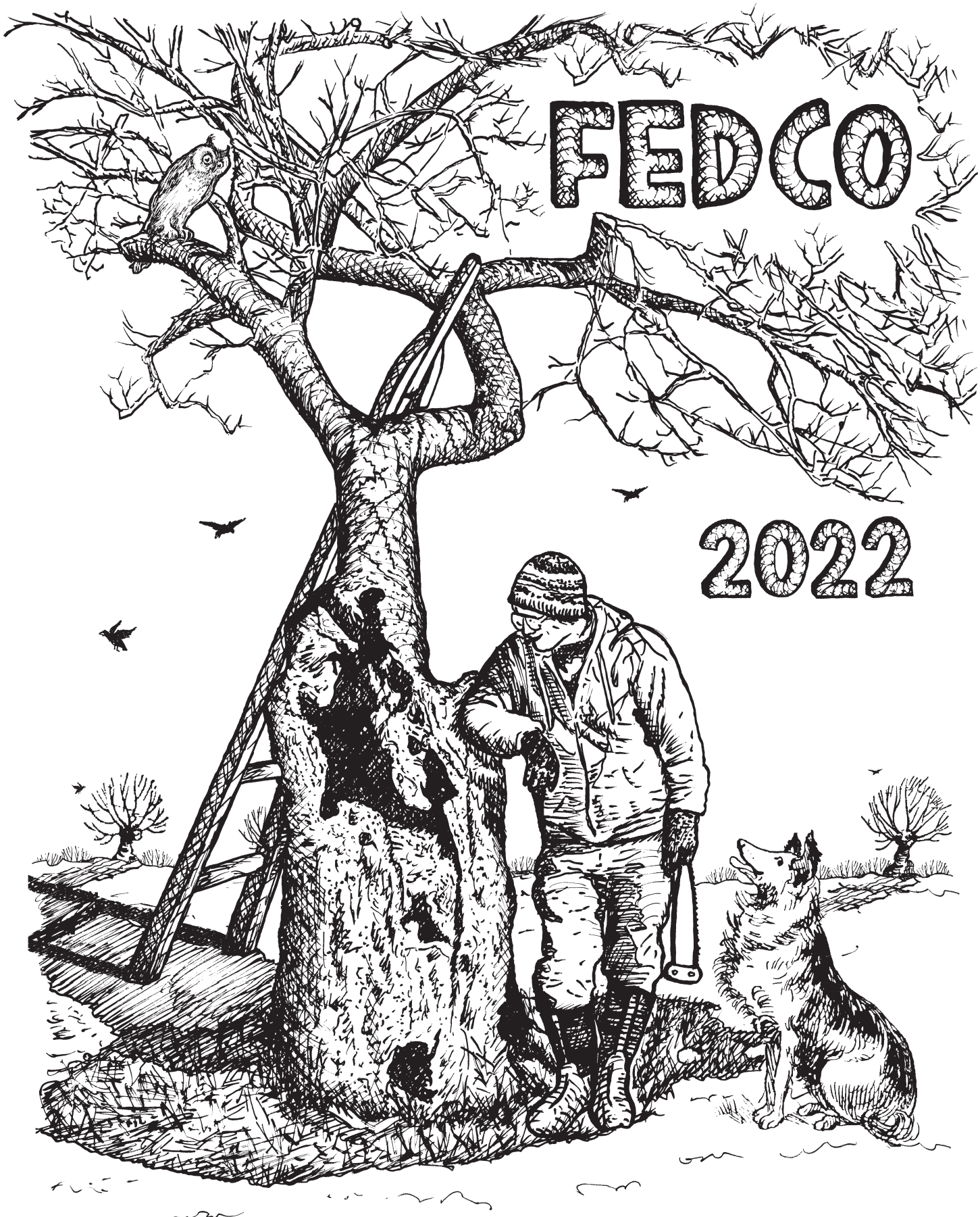


Trees, Shrubs & Perennials

FEDCO TREES 2022

Welcome to Fedco's 38th annual tree order.

Our goal is to provide the hardiest and healthiest plants available for cold climates, while supporting plant diversity, small-scale local agriculture, and a fair, cooperative and responsible workplace. Fedco is a small consumer/worker-owned cooperative founded in 1979. Our workspace is low-frills; we value fair pricing and livable wages. Profits are redistributed to consumer and worker members. Consider joining our co-op or applying for employment with us!

This year's final ordering deadline is **March 4**. Please note our discount structure for large orders and our discount deadline.

For many years we held our festive annual Tree Sale at our warehouse. If we see a safe window for that opportunity again, we'll let you know. In the meantime, all orders are shipped in spring.

As usual, we have varied our plant selections. We offer most of the old favorites every year and rotate through dozens of new offerings. You'll find new fruit trees, ornamentals and perennials throughout the catalog. We contract with dozens of growers and the bulk of our supply is grown locally on small diversified farms. While we do not label our woody plants as organic, nearly all of our fruit trees and many of our shrubs are grown by these standards, tended by hand and cultivated with horses. Many of our herbaceous perennials are certified organic and labeled as such.

If you have questions or concerns about your order, please contact us. If you are looking to place a very large order, drop us a line to discuss the options. We're here to help. If you haven't already, check out our **Seeds & Supplies** and **Bulbs** catalogs. If you enjoy this one, we're pretty sure you'll like those, too. We invite you to share with us your experiences growing plants. Many of our selections result from your suggestions. If you know of something growing near you that we should be offering, please write to us: questions@fedcoseeds.com

fedcoseeds.com/trees

A sheet spread beneath an apple tree can receive only apples; a sheet spread beneath the stars can receive only stardust.
– Antoine de Saint-Exupéry

This year's catalog is a tribute to the founding of Fedco Trees, and particularly to its founder John Bunker, who has retired from our day-to-day operations. It's been a funky winding path to get here, and we got a kick out of looking back. We thought you might, too. We drew from multiple sources to string together a Fedco Trees retrospective, beginning with the discovery of the Black Oxford apple more than 200 years ago.

In 1927 the New England Cooperative Extension Agents created the New England Seven, a reductive list of apple varieties commercial orchardists were encouraged to grow. A campaign ensued to actively purge orchards of all other varieties, which were deemed unworthy. Fifty years later, a young homesteader happened along in Maine at a time when the rare trees that survived the Seven—as well as the century's three severe test winters that took out tens of millions of apple trees—were leaning heavily toward the ground. John Bunker wasn't shy about pushing through the weeds, climbing trees, and knocking on doors in search of forgotten apples and their stories, which lived only in old-timers' memories or on dusty orchard maps. Tree by tree, mile after mile, he found the apples and researched until he matched them with names. Frederick Charles Bradford, who wrote *Apple Varieties in Maine* in 1911, might have been pleased that his book would one day become the guiding tool for this quest and the foundation for a small, thriving tree nursery.

John is still hanging out behind the scenes of our apple pages, feeding us ideas and nudging us in new directions. He'll never stop exploring. With the intrepid spirit of a great seeker, he deepens his inquiry into the lives of trees and into life itself. He won't stop until he's saved every apple he can from extinction…and listened to every great jazz record a thousand times. I have adored working with John, who has become one of the greatest mentors of my life, always modeling cooperation, deep listening, and a nimble sense of humor. In times of confusion, he offers the right words at the right time, the glass always half-full to brimming. John, we extend our biggest heartfelt THANK YOU for all you've done and all that you are. We love you!

Happy Planting and glad tidings in the year to come.

–Jen Ries & the Fedco Trees Team

Special thanks to John Bunker for letting us use illustrations from his latest book *Apples and the Art of Detection* (see page 14). For the timeline that runs through this catalog, we quoted from John's book, as well as from his journals and notes, and from a talk John and Fedco Seeds founder CR Lawn gave in March 2008 at Merryspring Nature Center in Camden, ME.

John Bunker, Laura Childs, Lauren Cormier, Jacob Mentlik and Jen Ries wrote plant descriptions. Elisabeth Benjamin edited with help from Joanna Linden and Emily Skrobis. Laura Childs and Elizabeth Smedberg did the layout.

Fedco Trees Guarantee Policy

Please inspect your order upon receipt and notify us immediately if something is missing or incorrect. Occasionally, plants incur damage during shipping. If limbs or tops are broken, prune to the next good bud. The plant will do fine. We guarantee to ship you a plant that is healthy, will leaf out, and is true to name. We expect that you will care for the plant from the moment it arrives, plant it in a timely fashion, water it (about 1" per week after bud swell) and protect it (see pp. 67-70.) Because we have no control over growing conditions such as weather, soil, cultural practices, pests, wildlife, or weed whackers, we cannot guarantee a plant's survival past leaf break. If you see no sign of life, scratch the outer bark with your fingernail. If the inner bark is green, the tree is still alive. Some plants take longer than others to break dormancy, so you may need to be patient. If you have thoroughly cared for the plant and it dies, we will refund the cost of the plant. In some cases, we may choose to issue a partial refund. We cannot offer replacements. Inevitably, some plants die through no fault of yours or ours. If a plant dies during the first growing season, don't hesitate to contact us. We will work with you to determine what went wrong. We are partners in the endeavor of filling the planet with plants and we want you to succeed. **Claims must be made no later than July 31 of the year the plant was received.** We do not guarantee plants that are potted by you, except for perennials, which are the only plants we recommend for temporary potting. We are not responsible for the quality of plant material in the event your package is not promptly picked up or opened. For scionwood orders, we do not issue refunds or replacements based on diameter of wood. We are not responsible if your grafts fail.

We limit our liability in all instances to the purchase price. The liability of Fedco Seeds, Inc., for breach of warranty, or any loss or damages arising out of the purchase or use of our products, including loss or damages resulting from any negligence whatsoever on our part, or strict liability in tort, shall be limited to the purchase price. By acceptance of the merchandise, the buyer acknowledges that the limitations and disclaimers herein described are conditions of sale, and that they constitute the entire agreement between the parties regarding any warranty or liability. Failure to assert claims within the aforementioned time frame renders this warranty null and void.

Important dates & deadlines

- **Volume discount deadline**, Friday, **January 14, 2022**
- **Ordering deadline** (except scionwood), Friday, **March 4**
- **Shipping** by FedEx, beginning late March, through May 6

- **Scionwood order deadline**, Friday, **February 18**
- **Shipment of scionwood** & rootstock starts around March 14.

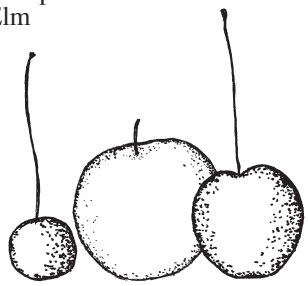
Due to the Covid-19 pandemic, we will not be hosting our annual Tree Sale. *If we have leftover inventory,* we will re-open online ordering in late April. Check our website for updates!

For complete **Ordering Instructions,** see page 34.

- Order online at **fedcoseeds.com/trees**. You can also check product availability and see color photos of most of our trees, shrubs and perennials.
- **Volume discounts: Order by January 14!**
  Orders $100 & over deduct 5%
  Orders $300+ deduct 10%
  Orders $600+ deduct 15%
  Orders $1200+ deduct 20%
- **Group ordering:** Earn volume discounts and save on shipping by ordering with neighbors. Learn more on p. 34.
- We no longer offer order pickups, but **Maine customers** pay only $10 flat-rate shipping on any size order!

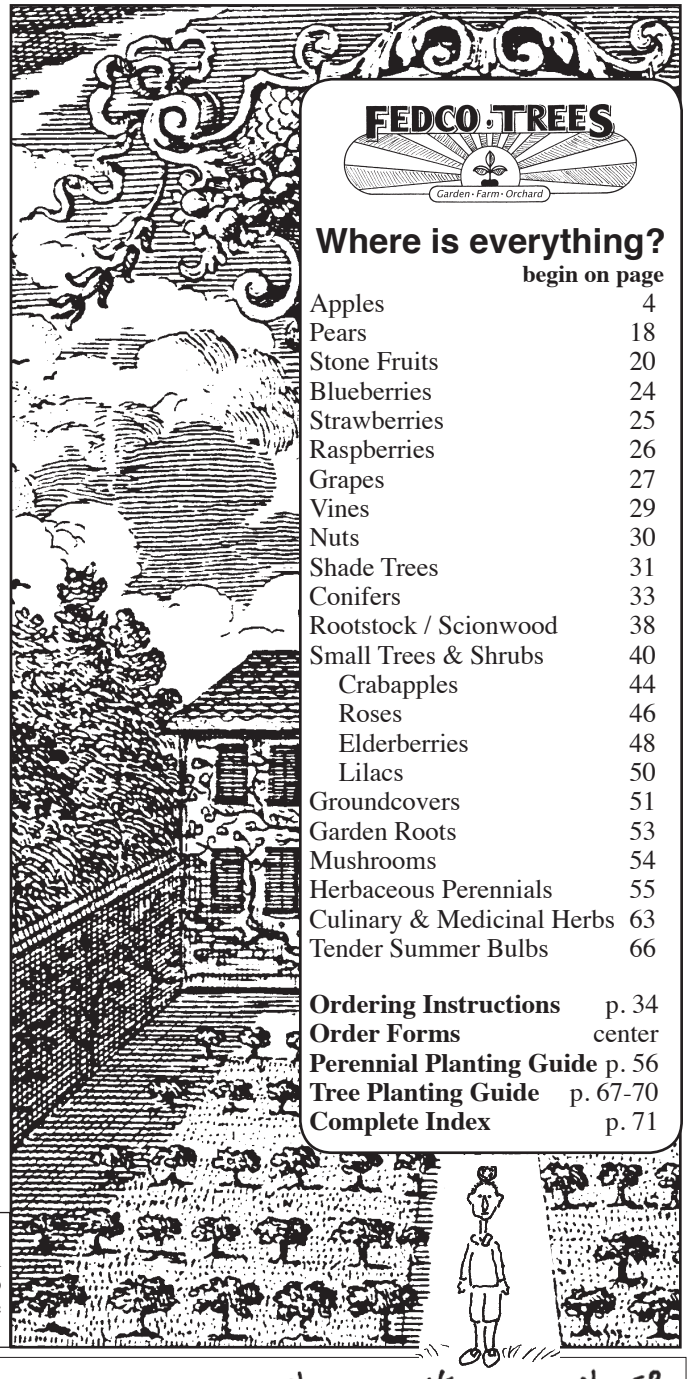
New for 2022 (or back after a long absence!)

- New Fruits, Berries, Grapes & Hops!
- Prairie Expedition American Elm
- Mountain Maple
- Black Huckleberry
- C.D. Eason Bell Heather
- Nameko Mushroom
- Hen of the Woods Mushroom
- Sweetflag
- New Crabs and Roses!
- New Heathers!
- New Perennials!



Indigenous Royalites

Fedco will donate 10% of sales on varieties bearing Native American names to Nibezun, a Wabanaki project in Maine that is working to rematriate Penobscot land and to create dialogue on healing throughout the extended community. For more about Indigenous Royalties, see page 21.



FEDCO TREES
Garden · Farm · Orchard

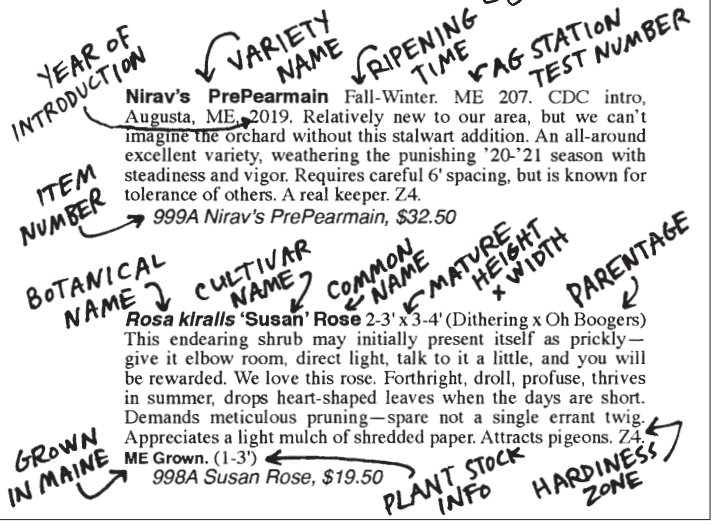
Where is everything?

	begin on page
Apples	4
Pears	18
Stone Fruits	20
Blueberries	24
Strawberries	25
Raspberries	26
Grapes	27
Vines	29
Nuts	30
Shade Trees	31
Conifers	33
Rootstock / Scionwood	38
Small Trees & Shrubs	40
Crabapples	44
Roses	46
Elderberries	48
Lilacs	50
Groundcovers	51
Garden Roots	53
Mushrooms	54
Herbaceous Perennials	55
Culinary & Medicinal Herbs	63
Tender Summer Bulbs	66
Ordering Instructions	p. 34
Order Forms	center
Perennial Planting Guide	p. 56
Tree Planting Guide	p. 67-70
Complete Index	p. 71

Our Variety Descriptions –

- **All trees and plants are bare-rooted** (except where noted). Because of the nature of dealing with living commodities, **size variations will naturally occur** within each crop.
- For fruit trees and berries, the **exact dates of peak ripeness** will vary from place to place.
- The **zone hardiness rating** will aid you in determining whether a plant will be hardy for you. The average minimum temperature in your area determines your zone (chart on p. 71). All plant descriptions list the coldest hardiness zone. Your own soil conditions, microclimate and topography will be equally important in determining the best varieties for you.
- Please note **pollination requirements** for fruits, nuts and berries. Some plants are self-pollinating, others require a second plant for pollination, and others require a second variety.
- We strive to give you accurate information about all the plants we sell. If you notice inaccuracies, please let us know.

Abbreviations:
ME Grown = grown in Maine at one of our small local nurseries.
PPA = Plant Patent Act.


YEAR OF INTRODUCTION
VARIETY NAME
RIPENING TIME
AG STATION TEST NUMBER
Nirav's PrePearmain Fall-Winter. ME 207. CDC intro, Augusta, ME, 2019. Relatively new to our area, but we can't imagine the orchard without this stalwart addition. An all-around excellent variety, weathering the punishing '20-'21 season with steadiness and vigor. Requires careful 6' spacing, but is known for tolerance of others. A real keeper. Z4.
ITEM NUMBER
999A Nirav's PrePearmain, $32.50
BOTANICAL NAME
CULTIVAR NAME
COMMON NAME
MATURE HEIGHT + WIDTH
PARENTAGE
Rosa kiralls 'Susan' Rose 2-3' x 3-4' (Dithering x Oh Boogers) This endearing shrub may initially present itself as prickly—give it elbow room, direct light, talk to it a little, and you will be rewarded. We love this rose. Forthright, droll, profuse, thrives in summer, drops heart-shaped leaves when the days are short. Demands meticulous pruning—spare not a single errant twig. Appreciates a light mulch of shredded paper. Attracts pigeons. Z4.
GROWN IN MAINE
ME Grown. (1-3')
998A Susan Rose, $19.50
PLANT STOCK INFO
HARDINESS ZONE

Eat a FEDCO apple

Apple variety	Season	All-Purpose	Fresh Eating	Storage	Cooking	Pies	High Flavor
102 Albion Russet	winter		●	●			
103 Api Etoile	winter		●	●			●
104 Aroostook Sunset	winter		●	●			
105 Ashmead's Kernel	winter		●	●			●
106 Aunt Penelope Winslow	fall	●	●	●	●		
107 Baldwin	winter	●	●	●	●	●	
109 Black Oxford	winter	●	●	●	●	●	
112 Blue Pearmain	winter	●	●	●	●	●	
113 Burgundy	fall		●		●		●
114 Calville Blanc d'Hiver	winter	●	●	●	●	●	
116 Canadian Strawberry	fall		●				●
118 Cherryfield	winter	●	●	●	●	●	●
119 Chestnut	fall		●		●		●
120 Cole's Quince	summer				●	●	
121 Cortland	fall	●	●		●	●	
122 Cox's Orange Pippin	fall		●				●
124 Duchess of Oldenburg	summer	●	●		●	●	
127 Esopus Spitzenburg	winter	●	●	●	●		●
129 Fameuse	fall	●	●		●	●	
131 Frostbite	fall		●	●			●
132 Gideon	summer		●		●		
134 Golden Russet	winter		●	●			●
135 GoldRush	winter		●	●			●
136 Gravenstein	summer	●	●		●	●	●
137 Gray Pearmain	winter	●	●	●			●
138 Grimes Golden	fall	●	●	●	●	●	●
139 Haralson	winter	●		●	●	●	
140 Honeycrisp	winter		●	●			●
141 Hubbardston Nonesuch	fall		●	●			
142 Hudson's Golden Gem	fall		●	●		●	
143 Ivan	fall		●				●
144 Judy	summer	●					
146 Kavanagh	fall	●	●		●		
147 Keepsake	winter	●	●	●	●		
148 King David	fall	●	●	●	●	●	●
151 Liberty	fall	●	●		●		
152 Liveland Raspberry	summer		●		●		
153 McIntosh	fall	●	●		●		
155 Nodhead	winter		●	●			
156 Northern Spy	winter	●	●	●	●	●	●
158 Oriole	summer		●		●		
159 Peach of Montreal	summer	●	●		●	●	
160 Pewaukee	winter			●	●		
161 Pitmaston Pineapple	fall		●				●
163 Red Astrachan	summer				●	●	
165 Redfield	fall				●	●	
166 Reinette Simirenko	winter		●	●			●
167 Rhode Island Greening	fall	●	●	●	●	●	
168 Ribston Pippin	fall	●	●	●	●		●
169 Roxbury Russet	winter	●	●	●	●		●
170 Spice Sweet	summer		●			●	●
171 St. Lawrence	fall	●	●		●	●	
174 Sweet Sal	fall		●	●			
175 Sweet Sixteen	fall	●	●	●	●	●	●
176 Thompson	summer	●			●		
177 Tolman Sweet	fall	●	●	●	●		
178 Trailman	summer		●				●
182 Wealthy	fall	●	●		●	●	
183 Westfield Seek-No-Further	fall		●	●			●
184 Wickson	fall		●	●			●
185 Williams Pride	summer		●		●		
187 Winekist	summer	●	●				●
189 Winthrop Greening	fall	●	●		●		
190 Wolf River	fall				●	●	
191 Yellow Bellflower	winter	●	●	●	●	●	
192 Yellow Transparent	summer		●		●		
193 Zestar	summer		●				●

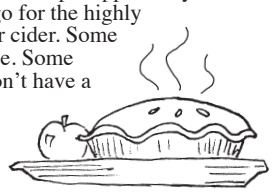
Choosing the right apple

Summer apples ripen in summer, are generally crisp only for a short period, do not store well, and are often best for cooking.
Fall apples store longer and are useful for a wide variety of purposes.
Winter apples ripen mid to late fall, store well, and reach their best flavor after weeks, or even months, of storage.
Dessert apples are delicious eaten raw.
Cider apples are especially suited to making fermented "hard" cider. Some cider apples are also good dessert fruit, but most are not. See the cider section on pages 16-17 and crabapples on page 44.
Subacid means tart!
Russet is a skin texture (fairly common on apple varieties and on a few pears and potatoes) that looks and feels somewhat like suede.
Bloom is a naturally occurring dust-like yeast film on the skin of some varieties of apples, plums, grapes and blueberries.

Hardiness zone: The USDA plant zone hardiness map (see page 71 for chart) is a guide designed to assist gardeners and orchardists in choosing suitable plants. The zones are based on the average annual minimum winter temperature. The lower the temperature, the lower the zone rating number, and the "hardier" the plant. Zone 3 is about as cold as it gets in any part of New York and New England. Most of northern New York, Vermont, New Hampshire and Maine would all be Zone 3. The central part of the four states would be Zone 4. The southern half of each state would be Zone 5 or 6.

When choosing apple varieties, note the zone rating at the end of each description. If an apple has a Z3 rating, you will be able to grow it successfully in the coldest locations in Maine, as well as two or three zones "south." In other words, if the rating is Z3, it may be in its prime in Z3, but should do well down to Z5 or 6. Typically, it will not perform well outside of that approximate range. Note that hardiness works both ways: you can't grow mangoes in Maine, and you can't grow most apples in Florida.

Choosing a variety: Not every variety is right for you. All-purpose apples are just that—they're good for a bunch of jobs. If you're planting just one tree, start there. However, if you're a history buff, consider the historical varieties and maybe plant one that originated nearby. If you don't eat many apples fresh but love pies, go for the pie apples. If you're a dessert connoisseur, skip all the others and go for the highly flavored dessert varieties. Some are strictly for cider. Some are great to put out at the camp for summer use. Some are perfect for those who want fall fruit but don't have a root cellar. Others keep all winter and into the following summer. Read the descriptions and consult the chart. If you have a question about a specific variety, drop an email: trees@fedcoseeds.com. We'll try to help!



Care: Apple trees are adaptable to a variety of soils and climates, though they prefer well-drained fertile soil. See pages 67–70 for information on soil preparation, planting and pest control. Varieties that bear fruit annually are noted in the descriptions; others normally bear every other year. With diligent annual pruning and thinning, most apples will produce an annual crop, one heavy, the next light.

Pollination: All apple trees require a second variety for pollination, but any apple or crabapple blooming within a quarter mile will probably do. Customers frequently ask us about pollination and apples. Early season, midseason, late season bloomers—what does it all mean? Should you be in a tizzy about pollination? No. If there is at least one other apple tree somewhere in your neighborhood, the bees will do their thing, and you'll get fruit. It can be a wild roadside apple tree. It can be an ornamental crabapple. It can be old or young, in your yard or your neighbor's. But it must be different from yours. In other words, avoid planting ten Honeycrisps if no other apples are in sight. Most apples flower at about the same time so timing is almost never an issue. However, if you live on a desert island with only an early bloomer and a late bloomer, you should plant a midseason bloomer, too.

Choosing a rootstock

Rootstock determines the size, longevity, hardiness and growth habits of a tree. After enthusiastic response from customers, we continue to offer an assortment of dwarf and semi-dwarf rootstocks in addition to the standard.

We offer bundles of rootstock for grafting on page 39.

Standard rootstock: Most of the apples we offer are on standard full-sized Antonovka (and occasionally Dolgo) rootstock. Standard trees have deep, substantial—and therefore hardier—root systems. By selecting the varieties appropriate to your district, grafted on standard rootstock, you may well be planting a tree that will be picked by your grandchildren's grandchildren. Standard trees will grow to be large, but you can manage the size with pruning. The largest trees in our orchard are now about 30 years old, yet the tallest are well under 20' due to careful pruning. Although standard-sized apple trees may be planted as close as 10–15' apart, they were typically planted 30' apart in 19th-c. orchards. We generally plant standard trees 20–25' apart with good results. (Trees on standard stock are shipped at 3-6'.)

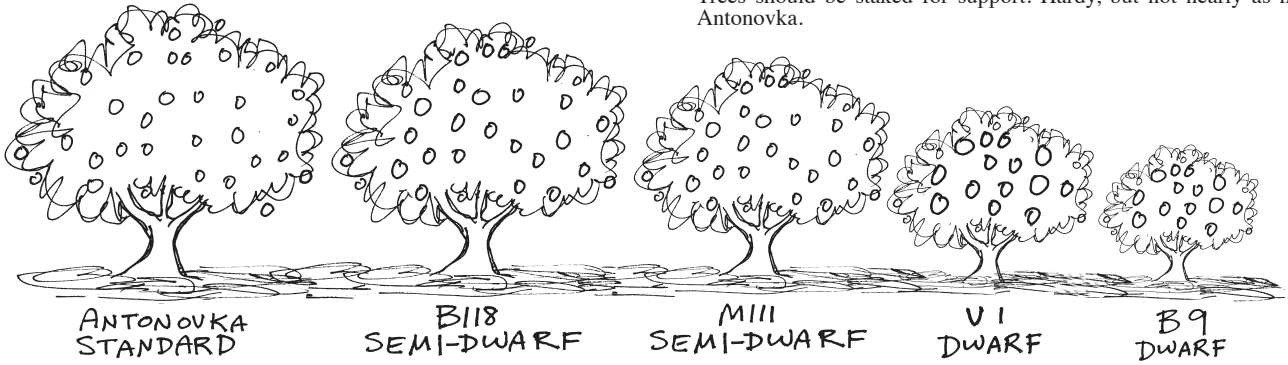
Semi-dwarf and dwarf rootstocks: We offer an assortment of semi-dwarf and dwarf apples on Bud 118, M111, V1 and B9 rootstocks. Each has great advantages for some growers, but these size-controlling rootstocks also have their limitations. Please read on and decide if they are what you want. If you are uncertain, stick with the good old standards, which are extremely rugged, hardier, more tolerant of drought and poor soils, very long-lived, and more capable of thriving under a regime of benign neglect. (Trees on semi-dwarf stock are shipped at 2½-5'; dwarf stock, 2-5'.)

• **Bud 118 semi-dwarfing** rootstock produces a tree about **85–90%** of standard size or even larger. Sometimes Bud 118 trees are called semi-standards or even standards. Plant about 20–25' apart. Considered to be more precocious (fruits at a young age) than standards, and probably more productive. Very hardy, though not as hardy as Antonovka.

• **M111 semi-dwarfing** rootstock produces a tree about **65–80%** of standard size. Sometimes M111 trees are called semi-standards. You can plant them closer together than standards, about 15–20' apart. M111 may not be more precocious than trees on standard. However it will likely be more productive. It has a relatively shallow spreading root system, does well in light soils, and is relatively drought tolerant. It is less well-rooted, not as long-lived, and not as hardy as Antonovka.

•**V1 dwarfing** rootstock produces a small dwarf tree about **55%** the size of a standard tree. This makes it easy to spray, prune and pick. It requires less space in your yard and will fruit at an early age. You can plant trees 10–15' apart. Trees on V1 are very hardy, somewhat fireblight resistant, sucker very little and should be staked or wired for support. V1 (Kerr x M9) is one of several dwarfing rootstock introductions from the Horticultural Experiment Station in Vineland, Ontario, Canada, 1958.

• **Bud 9 dwarfing** rootstock produces a tree that is very small. It is a true dwarf, about **25%** the size of standard. You can plant trees 5–10' apart. It will not live nearly as long as those grafted onto Antonovka. Trees should be staked for support. Hardy, but not nearly as hardy as Antonovka.



Apples *Malus* spp.

Rootstocks

We offer most apple varieties on standard-sized Antonovka rootstock. Where

A follows the item number in the apple section, the variety is on Antonovka (or occasionally Dolgo) standard rootstock.

B is on Bud 118 rootstock,

C is on M111 rootstock,

D is on Bud 9, and

E is on V1.

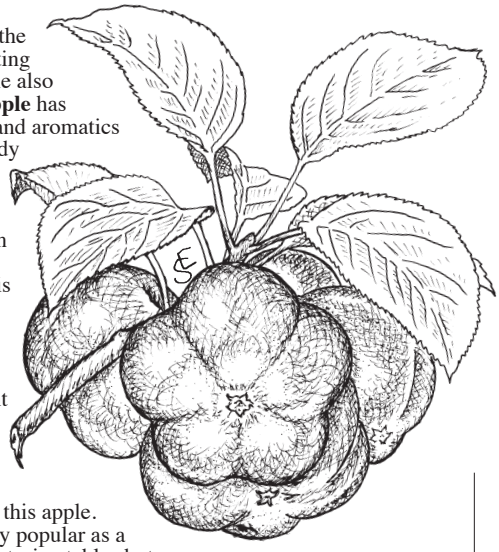
For more about rootstock, see pages 5 and 39.

ME Grown = grown in Maine at one of our small local nurseries.

Albion Russet Fall-Winter. Chance seedling. Quaker Hill Road, Albion, ME. Medium-small blocky-truncate fruit entirely covered with a yellowish-green russet and no blush. Resembles Golden Russet. Delicious fresh eating right through the fall. By the second week of October, the flavor is perfect with a hint of lime. Keeps until late January when the flesh is still quite firm and somewhat crisp with good flavor. In our trials, the Brix has been as high as 21 (1.086 SG) making it a good candidate for hard cider. The original roadside seedling tree is long gone, but fortunately John propagated it on his farm about 25 years ago. Blooms mid-late season. Probably Z4. **ME Grown.**

102B *Albion Russet on B118, $32.75*

Api Etoile Winter. Known in Europe since the 1600s, probably originating in France. This rare apple also known as **Star Lady Apple** has similar coloring, flavor and aromatics to the more common Lady apple, with one distinct difference: its unusual shape. While all apple cores display a star when cut in half horizontally, Api Etoile's fruit shape is a flattened rounded star, like an apple's stumpy rendition of a star fruit. The five carpels, or seed pockets, make prominent knobs to create this unusual form. A bright red blush over yellow skin further adds to the striking visual appeal of this apple. Api Etoile was extremely popular as a decorative feature on Victorian tables but was also prized for its flavor and storage ability. Scionwood provided by Gidon Coll of the Hudson Valley Apple Project. Blooms midseason. Z4. **ME Grown.**



103B *Api Etoile on B118, $32.75*

Aroostook Sunset Winter. Unknown parentage. Silas S Stiles intro, Mapleton, ME, before 1870. Also called **Aroostook**. Small roundish-conic light golden russet fruit has fine-grained sweet flesh. Resembles the famous variety Pomme Grise. Unlike Pomme Grise, Aroostook Sunset keeps until late spring or even into July. Said to be a seedling of "Greening," most likely referring to Rhode Island Greening but possibly any number of other large green apples. Rediscovered in Mapleton with the help of Leslie Gardiner and Gary Kazsas. It would be highly unlikely to find old trees outside of northwestern Maine, up near Ashland and Presque Isle. Now on trial in our central Maine orchard. Vigorous and productive tree. Z3. **ME Grown.**

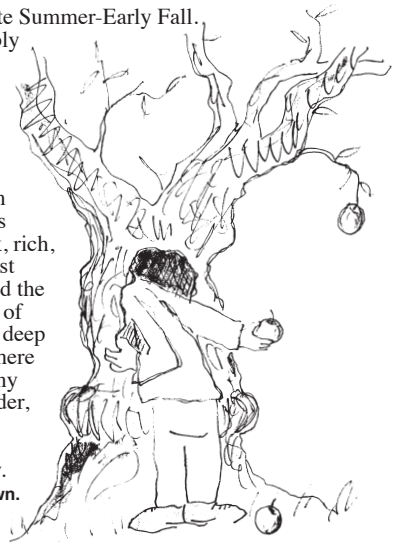
104A *Aroostook Sunset, $32.75*

Ashmead's Kernel Winter. Unknown parentage. Gloucester, England, about 1700. Possibly a seedling of Nonpareil. An after-dinner apple of unparalleled quality. Not for those who like mild sweet apples. Each bite is an intense aromatic sting of sharp and sweet, with hints of other indescribable but absolutely wonderful tastes and aftertastes. Beginning to show up here and there in commercial orchards. A good sharp addition to hard cider. Medium-small oblate and lopsided orange-gold-green russet fruits ripen in October. Store until the New Year to reach perfection. Keeps until they're all gone. Moderately vigorous tree may bear irregularly, but it's worth the wait. Somewhat scab resistant. Blooms midseason. Z4. **ME Grown.**

105A *Ashmead's Kernel, $32.75*

105C *Ashmead's Kernel on M111, $32.75*

Aunt Penelope Winslow Late Summer-Early Fall. Penelope Winslow intro, probably brought from Marshfield, MA, to North Haven, ME, between 1760 and 1770. Extremely rare all-purpose apple. Medium-sized, roundish, slightly ribbed, and conspicuously red-striped. Recommended for dessert use in October, but in early January it's still good for sauce: quick, thick, rich, yellow and slightly tart. John first learned of the apple and gathered the scionwood from Len Alexander of Chelsea, ME, whose family has deep roots on North Haven Island, where one APW tree still remains. Many thanks to Gil Foltz, Len Alexander, Ellen Kennedy, Jay Gould, and others who have helped piece together the apple's long history. Blooms midseason. Z4. **ME Grown.**



106C *Aunt Penelope Winslow on M111, $32.75*

Baldwin Winter. Wilmington, MA, about 1740. Also called **Butters Apple** or **Woodpecker**. Discovered on the Butters Farm by a surveyor planning the Middlesex Canal and noted as a favorite site for local woodpeckers. By 1850 Baldwin was the standard all-purpose home and commercial variety wherever it was grown. It remained dominant in Maine until the terrible winter of 1934 when tens of thousands of trees perished and McIntosh became king. Large round-conic thick-skinned fruit, almost entirely blushed, mottled and striped with red and deep carmine. Hard crisp juicy yellowish flesh makes excellent eating and cooking. Makes top-quality hard cider, blended or alone. Keeps till spring. Vigorous adaptable hugely productive long-lived healthy tree. When grower Dave Gott asked the late renowned entomologist Ron Prokopy his opinion of Baldwin, Ron replied that the apple is "not practical commercially due to biennialism but the only apple that is both disease and insect resistant." Blooms early to midseason. Z4. **ME Grown.**

107A *Baldwin, $32.75*

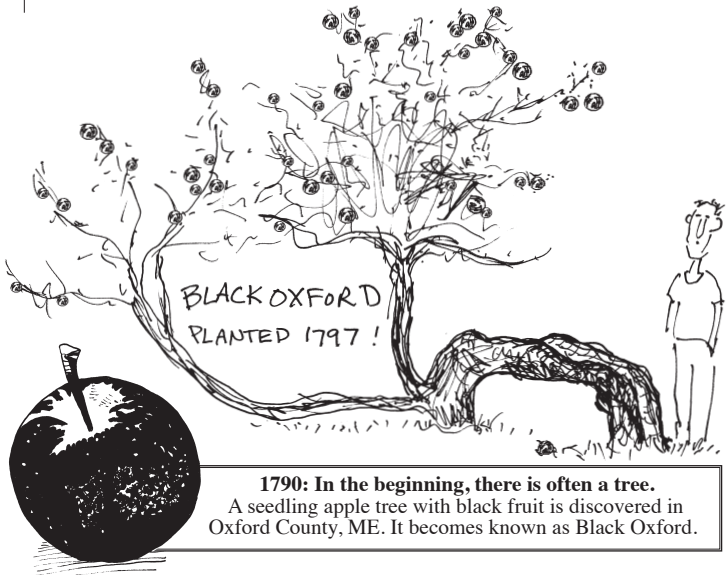
107C *Baldwin on M111, $32.75*

Black Oxford Winter. Hunt Russet x Blue Pearmain. Paris, Oxford County, ME, about 1790. This outstanding apple, a favorite long ago around much of Maine, has made a huge comeback. Rivals Honeycrisp as our bestselling apple. Medium-sized round fruit, deep purple with a blackish bloom. From a distance you might think you'd discovered a huge plum tree. Excellent pies, superb late cider. Leave the skins on for a delightful pink sauce. Best eating late December to March, but we've eaten them in July and they were still quite firm and tasty. They get sweeter and sweeter as the months go by. Good cooking until early summer. Some insect and disease resistance. Unusual light pink blooms early to midseason. Z4. **ME Grown.**

109A *Black Oxford, $32.75*

109C *Black Oxford on M111, $32.75*

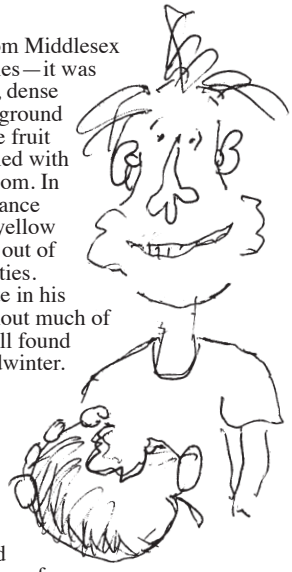
109E *Black Oxford on V1, $32.75*



1790: In the beginning, there is often a tree.
A seedling apple tree with black fruit is discovered in Oxford County, ME. It becomes known as Black Oxford.

Blue Pearmain Fall-Winter. Thought to be from Middlesex County, MA, 1700s. Our favorite for baked apples—it was made to be stuffed. Moderately juicy flesh, firm, dense and slightly crisp, sweet with a bit of a tart background flavor. Incredibly beautiful medium to very large fruit is streaked and splashed with purplish red, mottled with russet and covered with a distinct dusty blue bloom. In a pie, it has just enough firmness and a good balance of sweet and tart with hints of pear. Tart coarse yellow sauce cooks up in a couple minutes. Tasty eaten out of hand. One of New England's most famous varieties. Mentioned by Henry David Thoreau as a favorite in his wonderful essay "Wild Apples." Grown throughout much of Maine for well over 200 years. Massive trees still found here and there. Keeps in the root cellar until midwinter. Blooms midseason. Z4. **ME Grown.**

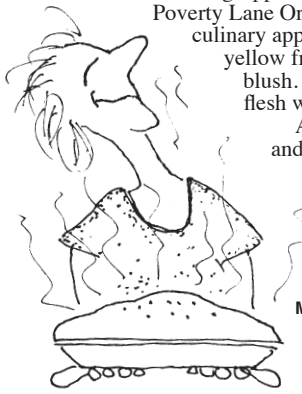
***112A** Blue Pearmain, $32.75*



Burgundy Late Summer-Early Fall. NY 161 (Monroe) x NY 18491 (Macoun x Antonovka) NY Ag Exp Stn, 1974. Northern Aroostook County fruit growers Steve and Barb Miller introduced Burgundy to us as Barb's favorite cooking apple. Striking for its large (3") size and glossy purplish-red roundish fruit. Waves and rays of red in the firm juicy flesh. Strong distinctive aroma and a pleasantly unique flavor with a tart zingy aftertaste. One taste tester said, "Wow, hey, that's really different!" Steve said, "It reaches out and grabs you!" Makes an aromatic well-balanced early cider. Bears annually, and fruit hangs on for extended picking. Stores about two months. Recommended for all northern districts. Extremely hardy. Blooms late. Z3. **ME Grown.**

***113A** Burgundy, $32.75*

Calville Blanc d'Hiver Winter. Unknown parentage. France or Germany, 16th c. Also called **White Winter Calville**. Famous as a dessert and cooking apple for more than 400 years. Steve Wood of Poverty Lane Orchards in Lebanon, NH, called it "the best culinary apple in the world." Large flattish pale green-yellow fruit with deep ribs and a dotted orange-red blush. Creamy-white aromatic fine-grained juicy flesh with a sweet distinctive effervescent flavor. Also recommended for vinegar, fresh cider and as a sharp (acid) component in fermented cider. Should be stored a month to reach peak flavor. Will keep until midwinter. Very vigorous strongly upright vase-shaped tree with good branch angles. Not for coldest areas though certainly hardy to Zone 4. Blooms midseason. Z4. **ME Grown.**



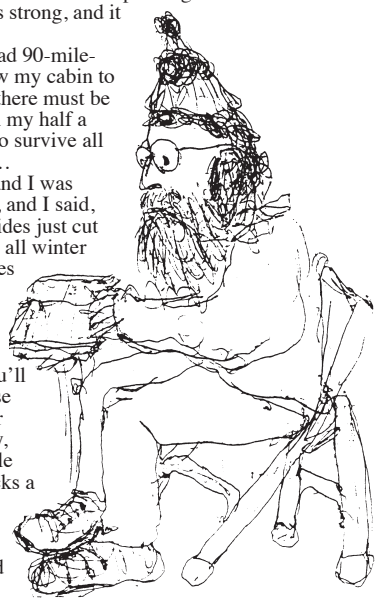
***114A** Calville Blanc d'Hiver, $32.75*
***114C** Calville Blanc d'Hiver on M111, $32.75*

Winter 1978: CR Lawn gets cold and makes a plan to get warm.

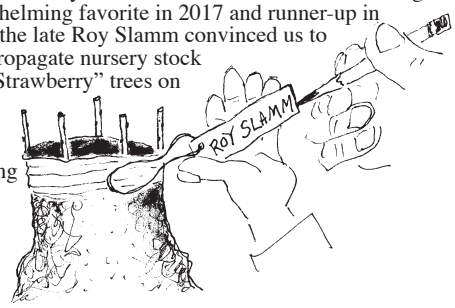
CR: I'm going to blame the whole thing on the blizzard of 1978. I was living in a cabin with no plumbing, no running water, no electricity, uninsulated, and heated only with a wood cookstove. I was spending the whole winter out there, and I was young, and I was strong, and it was fun—to a point.

Winter came along, and we had 90-mile-an-hour winds, and it almost blew my cabin to smithereens. It got me thinking, there must be something more I should do with my half a brain than just sit around trying to survive all winter in an isolated, cold place…

So the next fall came along, and I was involved in the co-op movement, and I said, well, I want to do something besides just cut wood and stay warm and survive all winter while I wait until the spring comes along and I plant my huge garden. So I made the Maine Federation of Cooperatives [a food distributor] an offer that they couldn't refuse. I said, if you'll put me up in your little warehouse there, somewhere in a cubicle for three months, December, January, February—those were the horrible months—and you pay me 75 bucks a month and let me live there, I'll come and help you with special projects. I knew I had a few skills. I was good at math … And they said yes.



Canadian Strawberry Fall. Unknown parentage. Solon, ME. Beautiful superb-tasting dessert apple. Surprisingly juicy distinctly tart full-flavored medium-to-large round-conic fruit. Rich buttery-yellow skin overspread with a veil of vibrant red-orange. Very good early season cider. Perfectly ripe at the end of September in central Maine where, in a good year, you won't find a better apple. At our Common Ground Fair taste tests, it usually vies for the crown with Cox's Orange Pippin. It was the overwhelming favorite in 2017 and runner-up in 2018 and 2019. In 1996 the late Roy Slamm convinced us to visit and subsequently propagate nursery stock from the three ancient "Strawberry" trees on his South Solon farm, thus saving the apple from almost certain extinction. Now spreading throughout Fedcoland. Fruit keeps about a month. Triploid: not suitable for pollinating other varieties. Blooms midseason. Not to be confused with Chenango Strawberry. Z4. **ME Grown.**



***116A** Canadian Strawberry, $32.75*

Cherryfield Fall-Winter. Westfield Seek-No-Further x unknown. Wyman B. Collins intro, Cherryfield, ME, about 1850. Also called **Collins**. Popularized more than 100 years ago by David Wass Campbell of Cherryfield and Welton Munson of UMaine. This all-purpose variety does everything well. We love it. Relatively tart with only a hint of sweetness. Makes a fairly quick tart sauce with a smooth texture—the skins mostly dissolve. Good in salads. Makes a highly flavored pie with great color and texture. Excellent sliced up on pizza. Irregular conic shape, washed and striped with pink. Ripens about Oct. 15 and keeps until the end of March. Rediscovered with the help of Margery Brown, Larry Brown, and Kathy Upton, all of Cherryfield, ME. Historically, may have been grown in Kennebec County under the name **Benton Red**, and in Illinois as **Salome**—Cherryfield is genetically identical to those two apples. Tree vigorous, hardy, spreading and productive. Blooms early-midseason. Z4. **ME Grown.**

***118A** Cherryfield, $32.75*

Chestnut Early Fall. MN 240 (Malinda x open-pollinated) U Minn, 1946. A dessert crab with truly excellent fruit for fresh eating, pickles and sauce. Round 2" yellow and bronze-red apple with some russeting. Firm crisp juicy fine-grained very sweet yellowish flesh. For a growing number of people in central Maine, late September is Chestnut apple time. Always scores high at our Common Ground Country Fair taste tests. A lot of people love this apple. For a few, despite its crispness and depth of flavor, it is too sweet. Chestnut alone with no sugar makes a sweet and subtle sauce. Not a keeper, but can be stored for a month or two. Vigorous, somewhat weeping, medium-sized productive tree tends to bear annually. Disease resistant. Beautiful in bloom, mid-late season. Z3. **ME Grown.**

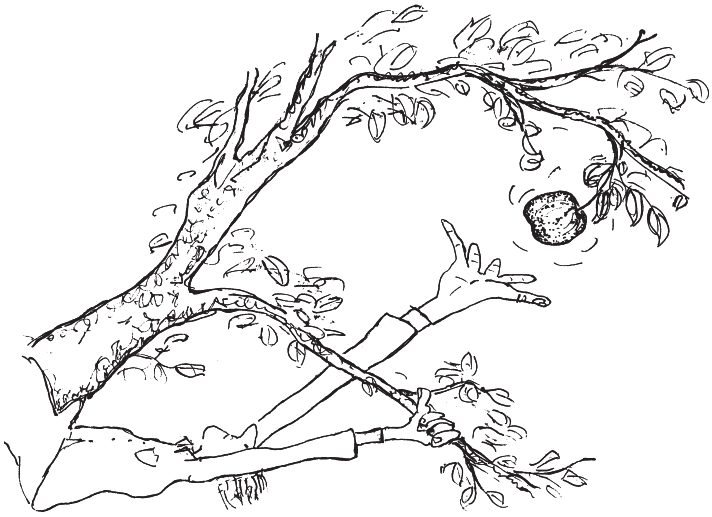
***119A** Chestnut, $32.75*
***119E** Chestnut on V1, $32.75*

Cole's Quince Summer. Introduced by Captain Henry Cole, Cornish, ME, about 1840. One of our favorite midsummer cooking apples. Large flattish-conical ribbed bright yellow fruit often with a brownish blush. In central Maine they ripen toward the end of August and stay good into mid-September. Unlike many other summer varieties, you can ripen them on the tree and let them drop—they won't rot if you blink a couple times. In the morning you can go out to the tree, pick up the four or five that dropped overnight and put them to use. They cook up quick into morning applesauce; delicious with oatmeal. They also make an excellent pie. Productive and mostly annual. Blooms early. Z4. **ME Grown.**

***120B** Cole's Quince on B118, $32.75*

Cortland Fall-Winter. Ben Davis x McIntosh. NY Stn, 1915. Although never as important as McIntosh, Cortland remains very popular throughout northern New England even in this era of many new introductions. Medium-large slightly ribbed dull red fruit with a purple blush. Excellent eating and cooking. Slow-oxidizing white fine-grained crisp tender juicy flesh: very good in salads. Produces a surprisingly delightful cider, fresh or fermented, in a mix or even on its own. Stores for a month or so. Vigorous tall upright spreading tree. Annual producer of heavy crops. A recent UMass study showed Cortland's resistance to apple maggot fly. Bears young; remove fruit for the first year or two to avoid stunting growth. Susceptible to scab. Blooms midseason. Z4. **ME Grown.**

***121A** Cortland, $32.75*
***121C** Cortland on M111, $32.75*
***121E** Cortland on V1, $32.75*



Cox's Orange Pippin Fall. Possibly a seedling of Ribston Pippin. Near Slough, Bucks, England, around 1825. Deservedly one of the three or four most famous of all apples. Not only one of the best eating apples ever but also one of the most sought-after in modern apple breeding; parent or grandparent of many other varieties. Revered in the U.K. Medium-sized all-purpose aromatic fruit is red-orange to red with orange russet striping and wash. Perfectly balanced slightly subacid flavor and crisp juicy tender flesh improve with storage. Moderately vigorous moderately productive tree bears young and annually. Prefers cooler climates and higher pH (6.5–7.5+). The oldest Maine Cox's I know is about 40, thriving in Mercer, Zone 4. Scab resistant. Blooms midseason. Z4. **ME Grown.**

122A *Cox's Orange Pippin, $32.75*
122C *Cox's Orange Pippin on M111, $32.75*

Duchess of Oldenburg Late Summer. Russia, well before 1800. Also called **Duchess** or simply **Dutch**. Imported to North America in 1835 and named in honor of Catherine Pavlovna, Grand Duchess of Oldenburg, sister of Czar Alexander. Extremely hardy. Medium-sized round red-striped fruit is crisp, tender, juicy, subacid and aromatic. Highly recommended for all sorts of cooking, especially pies and sauce. If you live where it's cold and you're looking for one apple, this is it. Historically planted extensively wherever growers needed extreme hardiness. Still popular in Aroostook county and other northern districts. Small to medium-sized adaptable tree. Duchess seedlings, rugged and hardy, make good rootstock for grafting. Scab resistant. Does not perform well in warmer districts. Blooms early-midseason. Z3. **ME Grown.**

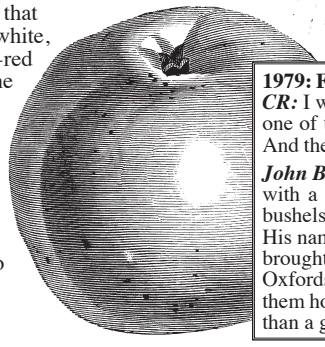
124A *Duchess of Oldenburg, $32.75*

Esopus Spitzenburg Fall-Winter. Esopus, NY, before 1776. For more than 200 years "Spitz" has been a choice dessert and culinary variety, mentioned in nearly every list of best-flavored apples. Slightly subacid, crisp and juicy. Excellent acid source for sweet or fermented cider. Medium-large bright red round-conic fruit, covered with russet dots. Moderately vigorous tree with easily trained wide-angle branches. Forever famous as Thomas Jefferson's favorite apple though it vastly prefers New York and New England to Virginia. Moderately susceptible to scab though we have never sprayed ours with fungicides and the fruit has been great. Blooms mid-late season. Z4. **ME Grown.**

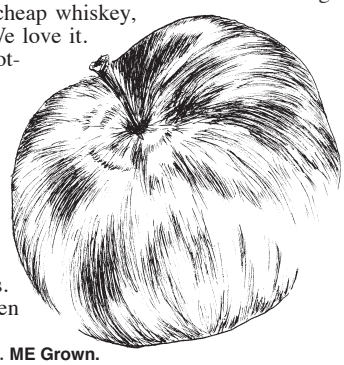
127A *Esopus Spitzenburg, $32.75*
127C *Esopus Spitzenburg on M111, $32.75*

Fameuse Early Fall. Unknown parentage. Canada, before 1700. Also called **Snow**. Excellent fresh eating, great sauce and sharp cider apple. Alas, however, not a pie apple—turns to soup. Famous in Maine for well over 200 years. The 1865 Department of Agriculture yearbook sums it up: "Flesh remarkably white, tender, juicy…deliciously pleasant, with a slight perfume… No orchard in the north can be counted as complete without this variety… It is just so good that everybody likes to eat of it; and when cooked, it is white, puffy, and delicious." Medium-small roundish ruby-red thin-skinned fruit. Keeps until late December. As one of the few apples that comes relatively true-to-type from seed, occasional "variations on a Fameuse theme" can be found in old orchards. Recent discoveries suggest that it could be one of the oldest varieties in North America. (For more details, you'll have to read John's recent book *Apples and the Art of Detection*.) Thought to be a parent of McIntosh. Productive long-lived tree. Susceptible to scab. Blooms mid-late. Z3. **ME Grown.**

129A *Fameuse, $32.75*



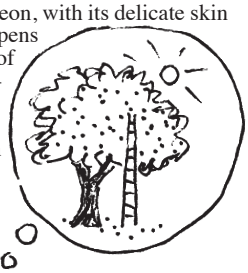
Frostbite Fall-Winter. MN 447. Unknown parentage. First fruited in 1921; named and introduced by U Minn in 2008. A massively flavored dessert apple, the one we most look forward to on our farm each fall. Likely the most distinctive, complex and unusually flavored apple you'll ever try. Astonished eaters have described it as tasting like molasses, olives, sugar cane, cheap whiskey, yogurt, tobacco juice, and so on. We love it. The aromatic crisp crystalline apricot-orange flesh, with its occasional red staining, is so juicy it might run down your hand. The roundish fruit is medium-sized and entirely covered with dark bluish-purple stripes. Lost in the dustbin of weird apples for nearly 90 years before it was finally named and released. Extremely hardy, productive and reliable; at its best in colder districts. A parent of the popular Sweet Sixteen and Keepsake, and grandparent to Honeycrisp. Blooms midseason. Z3. **ME Grown.**



131B *Frostbite on B118, $32.75*

Gideon Late Summer. Unknown parentage. Peter Gideon intro, Excelsior, MN, 1888. Peter Gideon is best known as the originator of Wealthy, one of the most famous of all American apple varieties. Though much less well known, Gideon has its fair share of fans. The large conic beautiful bright yellow rose-blushed summer apple was first introduced to us many years ago by Tom Roberts, who was then sharing Peacemeal Farm in Dixmont, ME, with the ancient tree. Tom said the fruit "produced heavily on an almost completely ignored tree that was in decline through age, rotten wood, etc. It grows in the open on a sunny knoll in a field, and produced a majority of very good looking apples with no care whatsoever…a sweet juicy eating apple, and…wonderful for sauce." Daryl Hunter of New Brunswick wrote to us: "One of the heritage varieties that I'd never part with is Gideon, with its delicate skin and its very juicy, pear-flavored flesh…" Ripens a bit before Red Astrachan, toward the end of August in central Maine. Use them up quickly—they don't keep. Seldom any scab. Blooms early. Many thanks to Mark Guzzi, who now tends the Peacemeal tree and provided us with scionwood. Z3. **ME Grown.**

132C *Gideon on M111, $32.75*

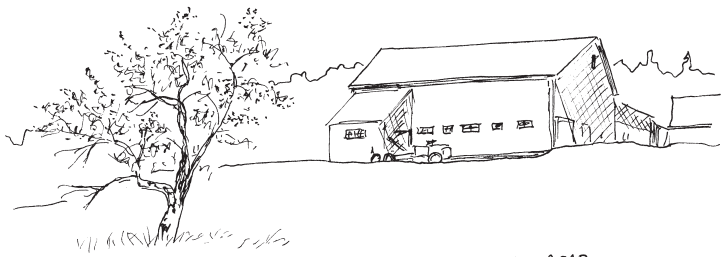


1979: Fedco Seeds is born; John Bunker beholds the Black Oxford apple. ***CR:*** I went to the Federation of Co-ops, and I said, hey, what do you think if one of the special projects I do is to organize a statewide co-op seed order. And they said, yeah, yeah, we like that. So Fedco Seeds was born out of that.

John Bunker: One late-October afternoon, a stocky, soft-spoken, older man with a large, gentle smile appeared at the [Belfast] Co-op Store with two bushels of apples. He asked us if we'd be willing to sell them on consignment. His name was Ira Proctor, and he was from Appleton Ridge.…The apples he brought with him that day were dark, purply black. He called them Black Oxfords. I had never seen a black apple before… I bought them all and took them home with me that night. I had discovered a goldmine. No, it was better than a goldmine.

Golden Russet Winter. Uncertain origin. Thought to be from England, New York or New England, before 1800. Round medium-sized russet fruit. Excellent eating; keeps all winter and well into spring. One of the best apples dried. The champagne of cider apples, ripening late in fall when the best sweet cider is ready to be made: sweet, balanced, thick and smooth. Also recommended as a sharp component for fermented cider. For more than 100 years, orchardists have been attempting to sort out the various russets. Several different apples have been called Golden Russet. Most resemble one another visually but differ in fruit qualities and tree habits. This is most likely the Golden Russet of western New York. Vigorous diverging up-curving tree with long willowy branches. Scab resistant. Blooms early to midseason. Z4. **ME Grown.**

***134A** Golden Russet, $32.75*
***134C** Golden Russet on M111, $32.75*

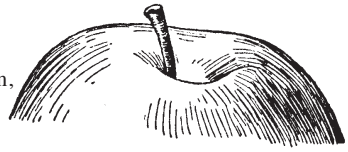


GoldRush Winter. Co-op 38 {PRI 2750-6=[Co-op 17 (PRI 1689-100) x Golden Delicious]} PRI Co-op, 1994. The first of the disease-resistant varieties from the Purdue-Rutgers-Illinois apple breeding program to have superior storage qualities. Not only that, it's probably the best-tasting apple to come out of that program. Medium-to-large round-conic fruit has uniform deep greenish-yellow opaque chewy skin that turns golden in storage. Creamy white green-flecked flesh is hard, very crisp, juicy and tart. Excellent flavor. Serve them for dessert in February and March and no one will be disappointed. Becoming very popular with cidermakers and commercial orchardists. Ripens late but successfully in central Maine. Keeps until May in the root cellar. Highly resistant to scab and powdery mildew. Moderate fireblight resistance. Blooms midseason to late. Z4. **ME Grown.**

***135B** GoldRush on B118, $32.75*
***135E** GoldRush on V1, $32.75*

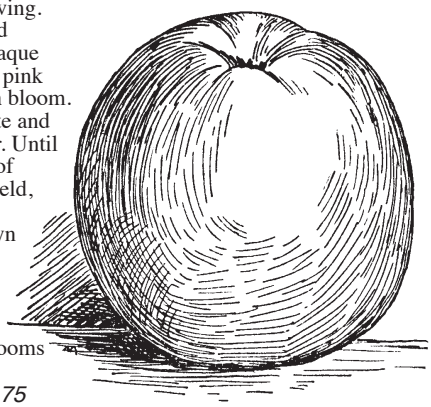
Gravenstein Late Summer. Thought to be of Russian, Italian or German origin, before 1700. Brought to the U.S. in the early 19th c. Probably the most famous of all pie apples. Rightly so. It's great. By 1880 it was also the most popular summer apple in Maine, especially along the coast. Fruit is medium to large, irregularly round, asymmetrical, usually ribbed. Thin tender skin, striped with yellow, red and orange. Tender crisp aromatic richly flavored juicy firm tart flesh. Outstanding eating and cooking. Rated "very good to best" by Beach in *The Apples of New York*. Still commonly grown in Nova Scotia, northern California, Oregon and Washington. Large vigorous productive tree with a nearly perfect wide-angle branching habit that requires practically no training. Ripens over several weeks. Too tender for coldest areas of New England. Triploid: not suitable for pollinating other varieties. Blooms early. Z4 or 5. **ME Grown.**

***136A** Gravenstein, $32.75*



Gray Pearmain Fall-Winter. Tolman Sweet x unknown. Probably Skowhegan, ME, before 1870. Absolutely delicious dessert apple with a distinct pear flavor and firm white juicy mildly tart flesh. Steadily gaining a devoted following. Medium-sized slightly ribbed and muffin-shaped fruit has a soft opaque greenish-yellow skin with a rosy pink blush, a russet veil, and a greyish bloom. Produces excellent juice. Pick late and eat them in the fall and all winter. Until recently the only trees we knew of were at The Apple Farm in Fairfield, across the line from Skowhegan. Through the generosity of Marilyn and Steve Meyerhans, the Gray Pearmain is now grown throughout Maine and beyond. Annually bearing easy-to-grow medium-sized spreading tree. Blooms midseason. Z4. **ME Grown.**

***137A** Gray Pearmain, $32.75*



Grimes Golden Fall. Parentage unknown. West Virginia, 1804. Tart citrusy crisp dense firm fruit is excellent for both dessert and cooking: wonderful spicy fresh eating, pies, applesauce and cider. Medium-sized roundish fruit with opaque yellow skin scattered with grey russet dots and an occasional faint blush. All-around excellent variety grown in old Maine orchards for more than 100 years. This is a perfect apple for the New England homestead north to about Bangor. An added bonus is that the fruit doesn't ripen all at once. In central Maine they begin to drop mid-October. We collect the drops and use them right up. Around Halloween we pick the bulk of the crop to store in the root cellar until late winter. Productive precocious tree. Blooms mid-late season. Z4. **ME Grown.**

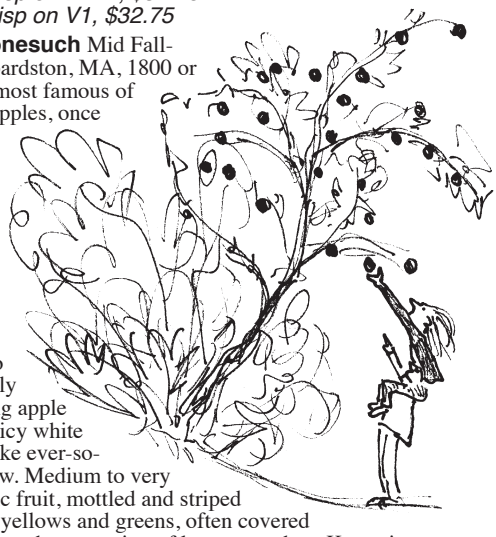
***138C** Grimes Golden on M111, $32.75*

Haralson Winter. MN 90 (Malinda x open-pollinated) U Minn, 1923. One of the first introductions from the Minnesota Horticultural Research Center and still the most commonly grown apple in Minnesota. A nearly perfect all-purpose apple for those in northernmost areas. Pleasant sprightly subacid flavor for fresh eating, pies, baking, sauce, freezing and cider. Roundish-conic bright red striped to mostly solid red fruit, with moderately conspicuous dots and some russeting. White firm crisp juicy flesh. Highly productive and reliable. Harvest in October, keeps until March. Extremely hardy naturally small tree with a strong central leader and well-formed wide-angled branching habit. Sets fruit heavily; thin some of the small apples to ensure larger fruit and encourage annual cropping. Fruit quality and size also seem to respond to better soils. Exhibits resistance to apple maggot, codling moth, cedar apple rust, fire blight, even scab. Blooms late. Z3. **ME Grown.**

***139A** Haralson, $32.75*

Honeycrisp Winter. MN 1711 (Keepsake x open-pollinated) U Minn, 1991. Medium-large fruit, mottled and striped red over yellow. Sweet and juicy with hard snapping-crisp texture. Top quality in September. Improves steadily in storage. Unusual because it ripens in early fall yet keeps up to 7 months in the root cellar. First of the many excellent University of Minnesota intros to receive large-scale commercial attention, now has a huge following. Our bestselling apple. Probably best planted north of Massachusetts; less suited to warmer districts. Tends towards annual bearing. Relatively small low-vigor upright spreading tree. Above-average scab resistance. Blooms mid-late season. Z3. **ME Grown.**

***140A** Honeycrisp, $32.75*
***140C** Honeycrisp on M111, $32.75*
***140E** Honeycrisp on V1, $32.75*



Hubbardston Nonesuch Mid Fall-Early Winter. Hubbardston, MA, 1800 or earlier. One of the most famous of all Massachusetts apples, once very popular and still found here and there today. John located a beautiful old specimen in Lincolnville, ME, still bearing regular crops of breathtakingly beautiful fruit that is also wonderful to eat. A superior subtly flavored fresh-eating apple with crisp tender juicy white flesh that glistens like ever-so-slightly-melted snow. Medium to very large roundish-conic fruit, mottled and striped with reds, oranges, yellows and greens, often covered with a veil of russet and a scattering of large grey dots. Keeps into January. Vigorous tree produces large and often annual crops. Blooms midseason. Z4. **ME Grown.**

***141A** Hubbardston Nonesuch, $32.75*

Hudson's Golden Gem Fall. AD Hudson's Wholesale Nurseries, Tangent, OR, 1931. A wild seedling discovered in a fence row and introduced soon afterward. A truly fine dessert variety of unique appearance, exceptional flavor, and sweet juicy crisp smooth firm-but-melting yellow pear-like flesh. Highly recommended for those who love to eat their apples out of hand. Nearly everyone loves the flavor after a single bite. Magnificent medium-to-large distinctly conical and beautifully russeted long-stemmed fruit. Skin a soft yellow-tan overlaid with a fine weave of light and dark browns. A favorite in Oregon, more recently gaining notice practically everywhere apples are grown. Stores several months. Productive scab-resistant tree resists powdery mildew and fireblight. Blooms mid-late. Z4. **ME Grown.**

***142B** Hudson's Golden Gem on B118, $32.75*

Ivan Late Summer-Early Fall. Probably *M. baccata* x open-pollinated. NE Hansen intro, 1916. Written up in 1927 in Hansen's Bulletin (#224) recent plant introductions. If you're a fan of snackable highly flavored dessert fruit, you will want this apple. Delicious, crisp, juicy, well-balanced sweet and tart, tangerine, floral, "honeysuckle," a little bit astringent, sugarcane but not molasses. Flavor and texture resembles Frostbite. Small 2" roundish-oblate rusty red fruit overlaid with darker red stripes and a scattering of pinpoint white dots. Long thin stem. When Cammy and John tasted Ivan at the Geneva USDA PGRU collection in early October 2016, they became instant fans. We are very excited about this apple. On trial now in central Maine with good results. Our fruit has been excellent. Keeps a few weeks in the fridge. Should thrive in most NY and New England locations. Probably Z4. **ME Grown.**

***143B** Ivan on B118, $32.75*

Judy Late Summer. Unknown parentage. Rome, ME, before 1870. Beautiful rosy-red all-purpose heirloom of central Maine. Ripens shortly after Labor Day. Medium-sized round-conic fruit has a large prominent russet splash surrounding the stem that offsets the vibrant blush. Mild flavor, sweet and low in acidity. Cooks up fairly quickly into a very decent sauce. One of the many varieties introduced—or popularized—by famed Belgrade orchardist Joseph Taylor. First mentioned in *Maine Farmer* in 1873. In 2001 Russell Libby discovered what may well have been the world's last Judy tree while poking around at a yard sale in Belgrade, a few miles from where the apple originated. That tree was likely set out by Carroll Sawyer, whose grandson Terry identified the apple for Russell, who called John that night giddy with excitement. It was a great find and has been preserved at the Maine Heritage Orchard. Blooms midseason. Z4. **ME Grown.**

***144A** Judy, $32.75*

Kavanagh Fall. Unknown parentage. James Kavanagh intro, Damariscotta Mills, ME, 1790. This unforgettable large apple is sometimes called **Cathead** because of its distinctive shape: a large stem end tapering to a small blossom end, typical of some Irish varieties. About half russet and half deep rich lime green. Slightly yellow flesh is mild, moderately crisp, moderately tart and subtle. Good fall and early winter eating, excellent for cooking and drying. Even frying. Foams up quickly into a wonderful creamy sauce; no need to remove the skins. Popular ages ago along the Maine coastal peninsulas, anywhere a schooner could land. Finally making its comeback! Blooms late. Z4. **ME Grown.**

***146A** Kavanagh, $32.75*

Keepsake Winter. MN 1593 (MN 447 [Frostbite] x Northern Spy) U Minn, 1979. One of the best of all winter storage varieties. Fine-textured flesh is hard, crisp, juicy and sweet. Excellent aromatic flavor, but wait about a month after picking before eating. Well named—keeps until July in the root cellar. Irregular conic medium-sized fruit is almost entirely overlaid with stripes and a wash of very deep red. Same parentage as Sweet Sixteen. Resembles Frostbite and Sweet Sixteen in appearance and taste, although the flavor is not quite as intense. Fruit size can be somewhat small. Don't be afraid to thin the crop each year 3 or 4 weeks after petal fall. You'll be happy you did. Moderately vigorous medium-sized tree reaches its prime in northern New England and the Upper Midwest. Somewhat resistant to scab. Blooms late. Z3. **ME Grown.**

***147B** Keepsake on B118, $32.75*

King David Fall-Winter. Chance seedling, thought to be Jonathan x Arkansas Black. Washington County, Arkansas, 1893. Stark Brothers Nursery intro, 1904. King David has a reputation as an intensely flavored apple. The initial bite is an explosion of flavors—pineapple, tangerine, lemon, sweet, sour, tart, sharp, aromatic and spicy. You may wince or moan or scream. You may see stars. Fine juicy flesh is firm yet tender and distinctly yellow. Known primarily as a dessert apple, but also good for pies and sauce. Medium-sized round-oblate-conic fruit is very dark solid maroon—nearly black. Occasionally found in old Maine orchards. The tree is vigorous, bearing young and regularly. Ripens in fall and keeps until the beginning of the year. Its one drawback is scab susceptibility. We grow it anyway. Blooms early midseason. Z4. **ME Grown.**

***148A** King David, $32.75*

1981: Bunker works his first winter season at Fedco Seeds.
Bunk: That year Fedco Seeds operated from the low-ceilinged basement of the Apple Farm in Fairfield, which was purchased in the 1970s by Steve and Marilyn Meyerhans. It has become one of central Maine's most admired commercial orchards, and they have become close friends of mine. Over the years they have been incredibly generous with their fruit for our Fedco displays [at the Common Ground Fair] as well as with their scionwood.

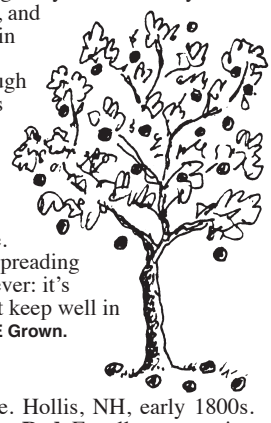
Liberty Late Summer-Fall. NY 55140-19 [Macoun x PRI 54-12 (PRI Co-op complex cross includes Rome Beauty, Jersey Black, McIntosh, Wealthy and *M. floribunda*)] NY Stn, 1978. One of the best of the disease-resistant varieties, particularly in the Northeast. Somewhat similar to Macoun. Handsome medium-sized round-conic bluish-pinkish-red apple with crisp white flesh of very good dessert quality when dead ripe. Excellent cooking and sweet cider, too. Recommended for single-variety sweet cider. Keeps till late fall. Begins fruit production at an early age, bearing consistent heavy annual crops. Naturally well-structured sturdy tree is easy to care for. Considered to be 100% scab-immune, though not resistant to insects or other lesser apple diseases. Don't let it crop too heavily at a young age. Blooms early to midseason. Z4. **ME Grown.**

***151A** Liberty, $32.75*
***151C** Liberty on M111, $32.75*
***151E** Liberty on V1, $32.75*

Liveland Raspberry Summer. Originated in Estonia where it is known as **Suislepper**, imported to the U.S. from Russia in 1870. Also called **Lowland Raspberry**. One of the hardiest and finest summer apples. Still found here and there in Maine dooryards and farm orchards. Unlike many summer apples, which are tart and hard and green one day and soft and mushy the next, Liveland Raspberry is actually crisp and breaking when it's ripe and stays that way just long enough to use and enjoy the crop. Medium to large round fruit with very tender clear waxen white skin is striped, shaded and marbled with light crimson. The white flesh, often stained red, is tender, mild, pleasant, subacid, almost sweet. One of the best varieties for summer fresh eating and of course for cooking. Ripens up here toward the later part of August. Will not store. Vigorous productive small to medium-sized tree. Disease and pest resistant. Early to midseason bloomer. Z3. **ME Grown.**

***152C** Liveland Raspberry on M111, $32.75*

McIntosh Fall. Thought to be a seedling of Fameuse or perhaps St. Lawrence. Dundela, Ontario, 1811. First discovered by John McIntosh on his farm near the St. Lawrence River. Originally called Granny's Apple, then McIntosh Red, sometimes Gem, and finally McIntosh or simply Mac. Beginning in about 1930, the most important apple in the Northeast until Honeycrisp appeared. Although not planted in many other locations, it grows to perfection in our cool climate. There are many strains of McIntosh, some selected for traits other than flavor, and the variety has gotten a bad reputation. Despite the criticism, this is a delicious aromatic apple. Excellent for sauce but turns to soup in a pie. Annual cropper. Large beautifully rounded spreading strong tree is easy to manage. Beware, however: it's extremely susceptible to scab. It also doesn't keep well in ordinary storage. Blooms midseason. Z4. **ME Grown.**

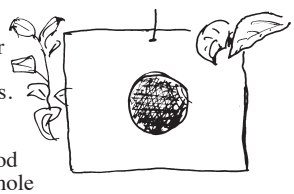


***153A** McIntosh, $32.75*
***153C** McIntosh on M111, $32.75*

Nodhead Fall-Winter. Unknown parentage. Hollis, NH, early 1800s. Also known as **Jewett's Red** or **Jewett's Fine Red**. Excellent tart eating right off the tree after a few frosty nights in October and remaining excellent well into winter. Tender and juicy. The first variety John learned 35 years ago when he moved to Palermo where they are scattered all over town. We've never heard a satisfactory explanation for the name, but have grown to love the flat truncate odd-shaped medium-sized deep crimson fruit—resembling Winesap—and the neat small easily managed rounded tree. Like Blue Pearmain, its possible parent, it has a heavy blue bloom. Some years ago John received a wonderful note from Ruth King: "When I was a little girl (I'm 89 now) a Nodhead tree grew just outside our dining room. I expect it was quite frail as there were so few apples that the five of us kids squabbled as to who got the most!" Bears a crop every year. Keeps until midwinter. Long-lived, natural semi-dwarf tree. Blooms late. Z4. **ME Grown.**

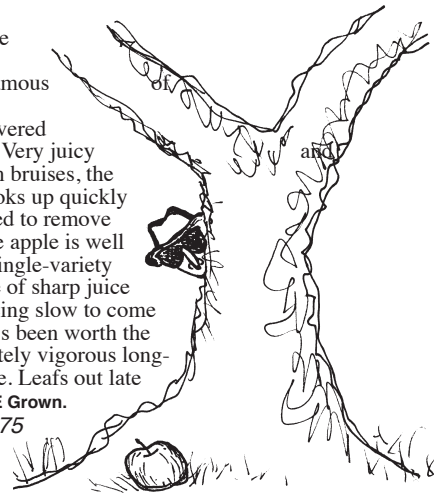
***155A** Nodhead, $32.75*

Apple Maggot and plywood



The late orchardist and rare apple collector Don Johnson made nifty apple maggot traps. We've gotten into doing so ourselves. In small orchards, the traps alone may be enough to reduce the AM pressure to a tolerable level. Here's how: Cut up plywood (3/8" or 1/2") into 8x11" rectangles. Drill a hole along the top edge. Paint the plywood bright yellow with a 2–3" red spot (the apple) in the center. Coat with Stiky Stuff (an adhesive found at fedcoseeds.com/ogs) and hang three in each tree in mid-June, positioning the traps at about chest height. Trim away any foliage that might stick to the trap. Check for AM flies. Now and then, when they get too gnarly, scrape the traps and add new Stiky Stuff. Remove traps around Labor Day.

Northern Spy Winter. Chance seedling. East Bloomfield, NY, about 1800. One of the most famous all heirloom apples. Very large delectable all-purpose fruit, covered with pink and light red stripes. Very juicy tender. Even when the thin skin bruises, the fruit keeps extremely well. Cooks up quickly into a loose mild sauce. No need to remove the skins. Its reputation as a pie apple is well deserved: makes a very good single-variety pie! Recommended as a source of sharp juice in cider. Its one drawback is being slow to come into bearing, although for us it's been worth the wait. Medium-to-large moderately vigorous long-lived tree. Good scab resistance. Leafs out late and blooms late season. Z4. **ME Grown.**



***156A** Northern Spy, $32.75*
***156C** Northern Spy on M111, $32.75*
***156D** Northern Spy on Bud 9, $32.75*

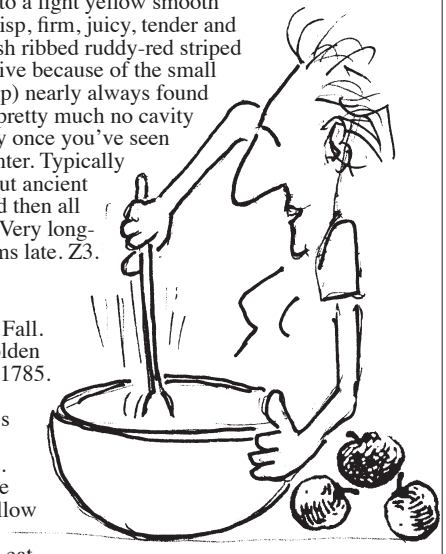
Oriole Late Summer. MN714 (Wealthy x MN Lowland Raspberry) U Minn, 1949. Like other apples bred at the U Minn farm in Excelsior, Oriole is extremely hardy and able to withstand the cold conditions of a Minnesota (or Maine!) winter. Medium-to-large fruit is almost spherical, with orange-yellow skin splashed and striped with red. Cream-colored flesh is juicy, lightly acidic and surprisingly crisp for a summer apple. Good for fresh eating or cooking. Does not keep much more than a week after picking. Blooms midseason. Z3. **ME Grown.**

***158B** Oriole on B118, $32.75*

Peach of Montreal Late Summer. Thought to be of French or Russian origin, before 1876. Also called **Peach** or **Montreal Peach**. Known as **Pomme Peche** in Quebec. All-purpose fruit ripens just after Duchess in colder districts. Excellent in sauce and nearly as good as Gravenstein in a pie. Develops from subacid to a richer and mellower flavor as the season progresses. Conical rich-yellow fruit often with a bright peach-like orange-red cheek. We love the comment Vic Caron of New Hampshire made years ago: "I think they are aptly named, the Peach is a peach." Still found in central and western Maine, across northern Vermont and New Hampshire, and into Quebec. Introduced to us by Josh Karp of Cate Hill Orchards in Craftsbury Common, VT. Blooms midseason. Z3. **ME Grown.**

***159A** Peach of Montreal, $32.75*

Pewaukee Fall-Winter. Duchess x Northern Spy. George Peffer intro, Pewaukee, WI, about 1842. A cross between two of the best culinary apples. Recommended for pies and sauce and other kitchen use. Cooks up fairly quickly into a light yellow smooth tart sauce. Yellowish flesh is crisp, firm, juicy, tender and subacid. Medium-sized roundish ribbed ruddy-red striped and blushed fruit. Very distinctive because of the small pronounced protuberance (or lip) nearly always found next to the stem. The fruit has pretty much no cavity at all, making it easy to identify once you've seen one or two. Keeps until midwinter. Typically grown in old Maine orchards but ancient trees can still be found now and then all across northern New England. Very long-lived, healthy and hardy. Blooms late. Z3. **ME Grown.**



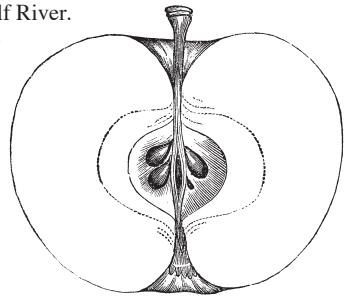
***160A** Pewaukee, $32.75*

Pitmaston Pineapple Early Fall. Thought to be a seedling of Golden Pippin. Herefords, England, c. 1785. This apple is in the same class as Egremont Russet, Ashmead's Kernel, and other old highly flavored English dessert apples. What an incredible treat to have these small 2" conical solid-yellow russetted apples ripening in mid-September. You can easily eat three or four at a sitting, or stock your pockets for a snack later on. The aromatic juicy fruit is variously described as slightly sweet, sweet-sharp, sugary, honeyed, nutty, rich, intense, distinctive, pineapple-like. We like little Pitmaston largely because the flavor is not only sweet, but also intense and peculiar. Keeps a month or so. Moderately vigorous upright habit. Scab resistant. Blooms late. Z4. **ME Grown.**

***161A** Pitmaston Pineapple, $32.75*

ME Grown = grown in Maine at one of our small local nurseries.

Red Astrachan Summer. Thought to be from Astrakhan on the Black Sea, prior to 1800. The standard Maine summer cooking apple for generations. Still found occasionally in old Maine dooryards. Juicy rich subacid white flesh frequently tinged with red makes a highly colored sauce. Especially loved for its distinctive flavor in pies. Medium-sized somewhat oblate fruit, splashed or sometimes solidly covered with dark red. An obvious russet patch surrounds the stem. Looks like a junior version of a Wolf River. Fruit ripens over a period of several weeks in midsummer, making it perfect for the home orchard and lousy for the commercial folks who want them all at once. After finding its way to Sweden, the apple traveled to England and finally to Massachusetts in 1835. From there it quickly spread throughout New England and beyond. Keeps for a few weeks with refrigeration. Very hardy. Blooms early. Z3. **ME Grown.**



***163A** Red Astrachan, $32.75*

Redfield Fall. Wolf River x Niedzwetzkyana. NY Stn, 1938. One of the best and largest of the red-fleshed apples. Although usually considered too tart for eating out of hand, the medium-large fruit with opaque solid rusty-red skin is absolutely great in pies, makes wonderful jelly and turns sauce and cider red. We love this apple. Gained fame in the hard-cider world thanks to the wonderful single-variety Redfield cider and Redfield blends made by the late Terry Maloney of West County Cider. Very sharp and bitter in cidermakers' lingo. (SG 1.052) Flesh is two-toned: deep pink fading to white around the core. The flowers are also two-toned, deep pink, tipped with small white lightning bolts. And the bronze-red foliage adds further interest all season. Bears young, annually, and shows some insect resistance in our trials. One of the very first to bloom each year. Z3. **ME Grown.**

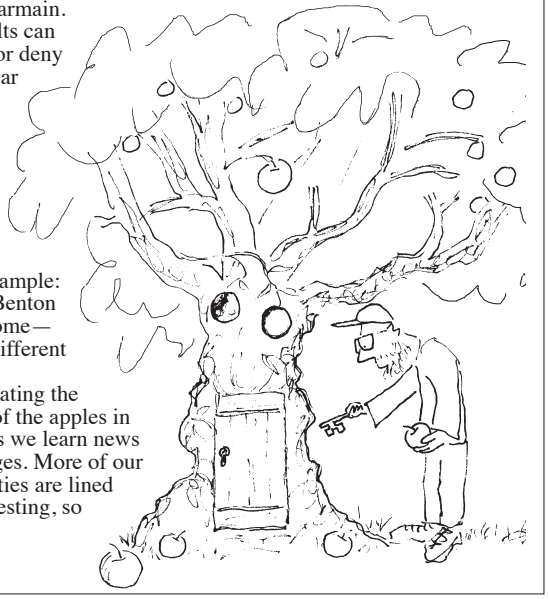
***165A** Redfield, $32.75*
***165C** Redfield on M111, $32.75*

Science! Revealing the origins of old varieties

Many identifications of rare or lost apple varieties have come down to educated guesses: the shape and color may fit, the location may match historical records, yet we can't be certain. With the help of Cameron Peace, a geneticist from the Washington State University's (WSU) Department of Horticulture, we can now solve some of our greatest apple mysteries through state-of-the-art SNP (single nucleotide polymorphism) array DNA testing. In partnership with the Maine Heritage Orchard, we have been submitting leaf samples of many apple varieties to the WSU lab and are receiving exciting data about parentages and potential relationships among varieties within the expanding database. Slowly, the pedigrees of rare varieties are being revealed.

The parents of modern apples are no mystery. We know Redfield combined the deep red flesh of the Russian apple Niedzwetzkyana with the large size and palatability of Wolf River. But what about our favorite heirlooms that were found as chance seedlings? DNA results have proven that our beloved Black Oxford was a cross between Blue Pearmain and Hunt Russet. Of course! From Hunt Russet, Black Oxford received its genes for long storage ability, while it inherited its stunning purple skin from Blue Pearmain.

DNA results can also confirm or deny that two similar specimens are identical, which is useful given the multitude of confusing synonyms in the apple world. For example: Cherryfield, Benton Red, and Salome—same apple, different names!



We're updating the descriptions of the apples in this catalog as we learn news of their lineages. More of our favorite varieties are lined up for DNA testing, so stay tuned!

Reinette Simirenko Winter. Ukraine, before 1895. May have originated on the farm of Platon Simirenko in the Ukraine although some say it's just a synonym for a fine old 19th c. New Jersey apple Wood's Greening. Became an instant favorite the day we first sampled it at the Fedco warehouse—landed straight into one taster's all-time top five. Medium-sized round waxy dotted grass-green fruit, often with a brownish-orange or pink blush. Greenish-yellow tender crisp fine-grained subacid flesh makes excellent eating. "Sweet, wine-like tangy flavor," according to the Classical Fruits catalog. Sort of a Granny Smith for the North. Ripens where Grannies do not. Stores well. Blooms late. Z4. **ME Grown.**

***166C** Reinette Simirenko on M111, $32.75*

Rhode Island Greening Fall-Winter. Green's Inn, near Newport, RI, about 1650. Also known as **Greening**. The classic New England cooking apple. Large roundish-conic-oblate green fruit often has a tannish blush. Light yellow-green flesh is crisp and tart. Great for pies, also excellent for fresh eating. The number one green apple for a few centuries before Granny Smith arrived from Down Under and stole the show. The most well-known of the various Greenings. Because of its high-quality fruit and adaptability to a range of soil conditions, Rhode Island Greening established itself as one of the most important commercial varieties throughout the Northeast in the 19th c. Keeps well into winter. About as hardy as Baldwin. Old trees can still be found in central Maine. Not recommended for northernmost districts, but cooks everywhere else will love it. Blooms late season. Z4. **ME Grown.**

***167A** Rhode Island Greening, $32.75*

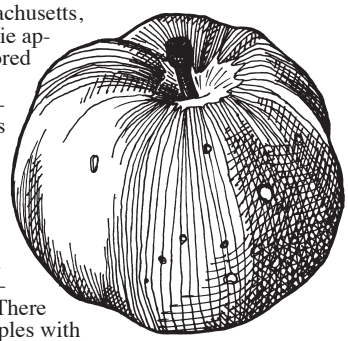
Ribston Pippin Fall-Winter. Ribston Hall, Yorkshire, England, about 1688. Highly recommended, richly flavored, multi-colored, partly russeted late fall dessert apple. In the words of Robert Hogg, the preeminent English pomologist of the 19th century, "There is no apple which has ever been introduced to this country, or indigenous to it, which is more generally cultivated, more familiarly known, or held in higher popular estimation than Ribston Pippin." One should never assume an English apple will do as well in the U.S., but Ribston is an exception. It was brought to Kennebec County about the time of the Revolution and then became one of the state's most important apples. *Maine Farmer* reported in 1854 that Ribston "does better in Maine than any where in the U.S." Also well known as the parent of the even more famous Cox's Orange Pippin, as well as of Starkey, one of John's all-time favorite Maine apples. Blooms midseason. Z4. **ME Grown.**

***168A** Ribston Pippin, $32.75*

Roxbury Russet Winter. Roxbury, MA, early 1600s. Said to be the first named American apple variety. One of the best late-winter dessert apples—it would be hard to live without a stash of them in our root cellar. Our favorite for winter sauce. Hard medium-large patchy green and russeted fruit not uniform in size, shape or color. Rich, spicy and juicy. Exceptional sauce. Dried, it's nice and tart with a pleasant first sensation and a lingering good aftertaste. The aromatic juice has potential for cider, fresh or fermented. Medium-to-large vigorous spreading tree. One of the most popular commercial apples of the 19th century, largely because it can store until summer. Scab resistant. Blooms midseason. Z4. **ME Grown.**

***169A** Roxbury Russet, $32.75*

***169C** Roxbury Russet on M111, $32.75*



Spice Sweet Late Summer. Massachusetts, early 1800s. One of the best of all pie apples. Well named. The orangey-colored cooked fruit actually is sweet and spicy. Relatively low in acid, unusual for a pie apple. Most sweet apples are unsuitable for pies, but Spice Sweet is exceptional. Very good fresh eating as well. Medium-size lumpy red fruit resembles Northern Spy. Laura Childs rediscovered it in 2011 in Belgrade, ME, on the old Bickford Farm. The Bickford grandparents always called it Old Spice. There are historical records of multiple apples with the name Spice Sweet or Spice Sweeting. This one is likely the Spice Sweeting described by Dr. John Warder in 1867. We're grateful to Russell Danner for his generosity in letting us visit the old tree and collect scionwood. Blooms midseason. Z4. **ME Grown.**

***170A** Spice Sweet, $32.75*

The Crows Nest, the Owl and the Orchard

Summer 1963, North Belgrade, ME

A twelve-year-old John Bunker sat with eyes fixed on an old photograph of a little cabin that once graced the shores of Great Pond at Camp Merryweather. He'd heard tell that sometime in the late 19th c. the cabin, called the Crows Nest, was moved to a nearby farm by a team of horses. Bunk did a painting from the photograph and wondered if the cabin was still standing or had been lost to the ravages of time.

A few weeks later, a group of kids piled into John Shaw's car for a field trip out to Rummel's Ice Cream. Bunk peered out the window as they rumbled past the old farmsteads on Taylor Woods Road. The driver pointed at a house and said, "Look there, it's the old cabin that used be at Camp Merryweather. They tacked it onto the old barn." Bunk couldn't have been more delighted. Little did he know that 48 years later he would return to that very spot and make another remarkable discovery.

Just 200 yards away from that cabin sat the noble stone house and orchard built by one of the greatest fruit preservationist families in U.S. The Taylor house was built in 1857 with unique stones collected from each of Maine's 16 counties. Built into the east wall is a small stone mosaic of a wise old owl, quietly watching all who pass. The cabin was situated on what was once the land of a local Quaker minister and fruit grower, a man who, 100 years ago, advertised himself in local agricultural papers as: "JOSEPH TAYLOR, North Belgrade, ME, Grower of Choice Apples and Pears."

September 2011, Fruit Exploring Expedition, Belgrade

I grew up a just a few miles from the Taylor place and knew that the original trees the family introduced to the area could soon be on their last legs. I spent several days rambling around town looking for ancient trees and knocking on doors in search of anyone who might know the history of the pomological majesties that graced their dooryards. I knew I needed to bring in an expert, so I asked Bunk to join me on a fruit exploring expedition. He had explored the town before and was eager to return.

Our first stop was the old Bickford Farm, a few miles north of the Taylor place. A small group from the local historical society joined us there, and I was ready with a pencil, a pocket-sized spiral-bound notebook, an 1865 map of Belgrade, and a rare copy of George Stilphen's *The Apples of Maine*. Bunk brought along a magic marker, a fruit picker, and a stack of brown paper bags for collecting apples.

A proud and golden-haired Dwayne Bickford introduced us to one of the rarest apple trees we would ever see, a double grafted Spice Sweet. For more than a century the Bickford family enjoyed pies made from the spicy fruits, yet the history of the tree and how it came to be had been lost. We were able to reconnect a small part of that history with Stilphen's book, which contained a detailed description of the Spice Sweet's physical characteristics and flavor profile, as well as a direct connection to the Taylor orchard on Belgrade Hill. (In August 2021, this incredible tree got run over by a semi-truck. We're sad but relieved to know we've grafted the variety far and wide for future generations.)

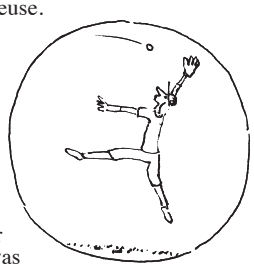
We visited seven more farms that day and our final stop was the Taylor place. The new owner, Jillian Jolicoeur, gave us an unforgettable tour of what remains of the orchard. Bunker took in the scene in quiet reverence. His eyes fixed upon the stone-faced owl, and he told me that just the previous year, he had incorporated an owl-shaped stone into his new chimney. We continued up the hill and took samples from each tree in hopes of discovering another rare variety. In the 1850s the orchard had at least 60 varieties; today, fewer than a dozen remain. We believe that Taylor's fruit tree selections were popularized locally and can be found on old farmsteads along the Kennebec River and in the surrounding towns of central Maine.

Passing the grafting knife...

It used to be practically illegal to cut down an apple tree in Maine. If you did, you would surely catch hell from your neighbors. That culture has shifted, and it's up to us to save old varieties. Learn how to collect scionwood and graft. Above all, get to know your neighbors, listen to their stories, have fun learning about local agricultural history. Share what you learn with others, and pass the graft to the next generation like Bunker did for me. He's planning to go back to Belgrade this fall for another round of sleuthing—there's always more to discover.

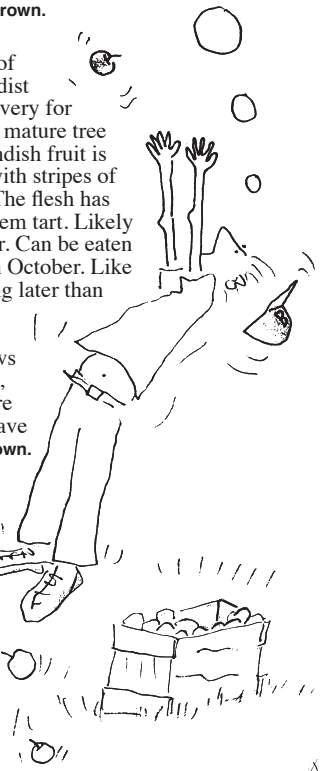
– Laura Childs

St. Lawrence Early Fall. Seedling of Fameuse. Montreal, Canada, 19th c. or possibly much earlier. An iconic striped all-purpose apple that is immediately recognizable once you know it. Medium-large round-oblate fruits are pale yellow washed and marbled with bright red and overlaid with striking dark red stripes. Crisp juicy tender fine-grained flesh is tart with a hint of lemon. Recommended for dessert, pies or sauce. Ripens over a period of several weeks in September and keeps a few weeks. *Red* St. Lawrence was discovered in Newburgh, ME, as a sport (mutation) of this variety. Blooms midseason. Z3. **ME Grown.**



***171A** St. Lawrence, $32.75*

Sweet Sal Summer-Fall-Winter. Seedling of Northern Spy. Winthrop, ME. Maine orchardist Morris Towle (1911-1993) named this discovery for his daughter. We're fairly sure that only one mature tree remains alive today. The medium-sized roundish fruit is washed with vibrant purple-pink, overlaid with stripes of deep rusty red and covered with pink dots. The flesh has no acidity, perfect for those who don't like 'em tart. Likely a good sweet component for fermented cider. Can be eaten from August to March although at its best in October. Like its parent Northern Spy, it comes into bearing later than most varieties and keeps extremely well. In fact, we've been surprised at what a good storage apple it is. Tree is vigorous and grows upright. It was a treat to meet Sally Dawson, Sal herself, a few years ago. Apparently there was also a Sour Sal, but that one seems to have disappeared! Blooms midseason. Z4. **ME Grown.**



***174A** Sweet Sal, $32.75*

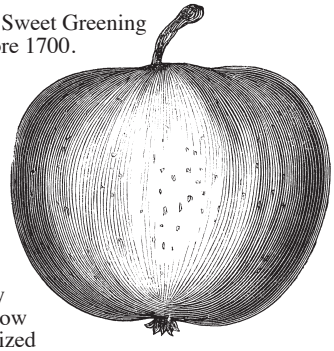
Sweet Sixteen Fall. MN 1630 (MN447 [Frostbite] x Northern Spy) U Minn, 1979. The first bite into a Sweet Sixteen is always a surprise. Fine-textured crisp flesh contains an astounding unusually complex combination of sweet, nutty and spicy flavors with slight anise essence, sometimes described as cherry, vanilla or even bourbon. We always love Sweet Sixteen season. Truly excellent fresh eating, although it is too sweet for some palates. Also good for pies and sauce. Round-conic bronze-red medium-sized fruit, striped and washed with rose-red. Annual bearer if thinned. Very hardy moderate-sized vigorous vase-shaped tree grows upright with willowy branches that get loaded with fruit but do not break. Best grown in northern districts. Keeps till midwinter. Some resistance to scab. Blooms mid to late season. Z3. **ME Grown.**

***175B** Sweet Sixteen on B118, $32.75*

Thompson Summer. Seed from Barre, MA, unknown parentage. Mercer, Somerset County, ME, 1816. Early season eating and cooking apple, ripens in August. Round-conic shape reminiscent of Red Delicious, solid red overspread with stripes of darker red. Glistening crystalline firm white flesh with a pink hue just below the skin. Sweet flavor has hints of plum and pear. Does not keep. Great confusion and passion surrounds this apple that was introduced by John Thompson, one of Mercer's earliest settlers. Some claim that the fruit is synonymous with the Massachusetts apple Williams. (They are quite similar.) Others claim it's synonymous with John Thompson's other introduction, Somerset of Maine. (Not!) At least two Thompson trees that we know of are still standing in Mercer, an exceedingly old one on Bacon Road and another more recently grafted at Francis Fenton's Sandy River Orchard. Rare. Blooms midseason. Z4. **ME Grown.**

***176A** Thompson, $32.75*

Tolman Sweet Fall-Early Winter. Sweet Greening x Old Russet. Dorchester, MA, before 1700. Sometimes called **Talman Sweet**, **Taulman Sweet**, **Tomey Sweet** and many variations. One of the first American apples and one of the few to remain popular for centuries. Truly an all-purpose fruit, used for cider, cooking, dessert and even animal fodder. Once popular for pickling, boiling and baking. Especially prized in Maine for apple cake. Unforgettably peculiar sweet strange flavor. Very low acidity. Moderately juicy medium-sized greenish fruit, sometimes with a bit of a blush and often marked by a suture line running from stem to stern. Long-lived heavy-bearing vigorous tree. Still often found throughout central and southern Maine. Blooms midseason. Z4. **ME Grown.**



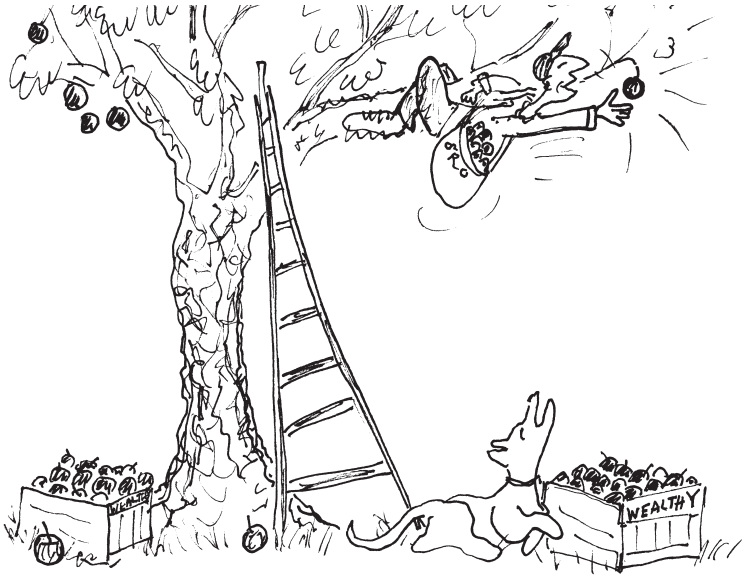
***177A** Tolman Sweet, $32.75*

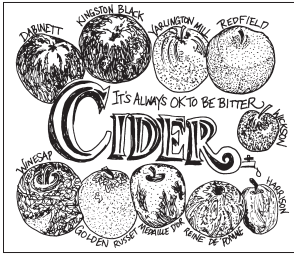
Trailman Summer. Trail x Osman. Beaverlodge Research Farm, Alberta, Canada, 1973. In spite of its small size, this is an exceptionally delicious fruit for fresh eating. Spicy sweet crisp crunchy golden-yellow flesh. Visitors who try it in our orchard usually fall in love with it instantly. Some have called it the best summer apple they've ever tasted—some even call it their favorite apple of any season! Ripens around Aug. 20 in central Maine. Translucent yellow skin has a porcelain finish, white bloom and sometimes a brownish-red blush. Fruit the size and shape of an egg. Hangs on the tree for 2 weeks without softening. Precocious, annually productive, moderately vigorous, somewhat drooping and spreading tree. Exceedingly hardy. Might be tasteless south of Zone 6. One of the first to bloom each year. Zone 3 or even 2. **ME Grown.**

***178B** Trailman on B118, $32.75*

Wealthy Fall. Thought to be a seedling of cherry crab, but recent DNA analysis proves old history wrong: one parent is Duchess. Excelsior, MN, 1860. A Maine native of sorts, the seed having come from Bangor. One of the most famous of all hardy varieties, with its perfect texture and complex flavors, all-purpose Wealthy is considered to be one of the best apples. We agree. Round-oblate medium-sized fruit is pale greenish-yellow streaked with carmine. Tender very juicy sweet subacid flesh is white, often stained red. About as firm as McIntosh. Good eating and even better cooking. Wonderful pies! Good acid source for fermented cider. Ripens over a long period. Productive moderately vigorous long-lived naturally small-statured tree. Blooms early. Z3. **ME Grown.**

***182B** Wealthy on B118, $32.75*





Whoa, whoa, whoa! Where are the T-shirts?!

You can still get T-shirts featuring John Bunker's apple artwork. But you have to go to our **Seeds & Supplies** catalog, or to the website: fedcoseeds.com/ogs. You might even end up with a Dino-melon tee to complete your Fedco fashion collection!

Early 1980s: Fedco Seeds incorporates separately from the Federation of Cooperatives, which soon after goes bankrupt.

CR: The first question was, "Are you still in business?" People would start calling us up, so I had to reassure everybody.

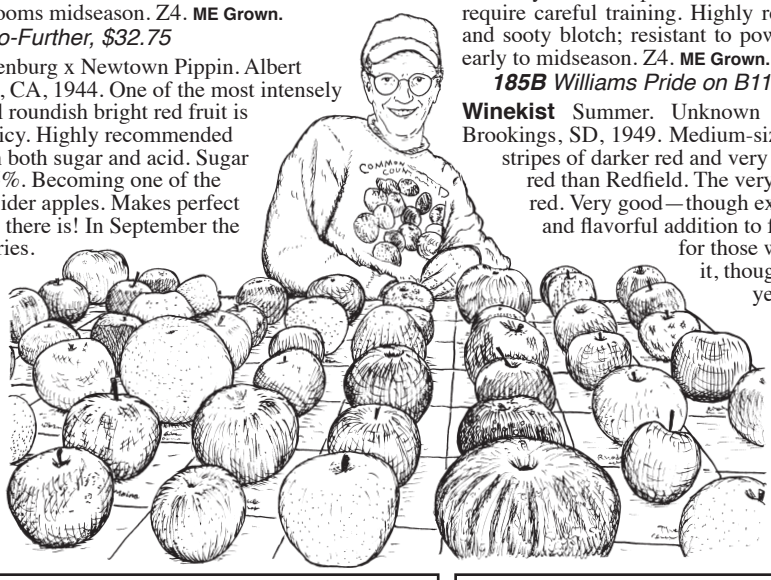
Then came the next question: Do we want to keep the Fedco name or not?… If you don't know what 'Fedco' stands for, it almost sounds like something out of George Orwell! So that was a hard decision that I wrestled over. I finally said, well, …we developed a little bit of goodwill with this and it's worked pretty well for three years; let's just keep the name Fedco, and if anybody asks, we can tell them what it stands for. Hardly anybody ever asks, but now you know what it stands for.

Westfield Seek-No-Further Fall. Westfield, MA, mid-18th c. One of the most famous of all heirloom dessert apples. Still loved by anyone who knows it. A Hudson River grower of 200 varieties declared it "the best apple in the world." Medium-sized roundish-conic fruit is dull rusty red, yellow, conspicuously dotted and sometimes russeted. Highly flavored, rich, a little bit sweet, a little bit sour, firm, crisp and juicy. It has everything. *The Apples of New York* calls it "rich, sometimes astringent, peculiarly aromatic, sprightly, very good to best." Also an outstanding drying apple. Keeps until early winter. Hardier tree than Baldwin. Michael Clark provided our scionwood from his beautiful broken-down ancient tree in Knox, ME. Blooms midseason. Z4. **ME Grown.**

183A *Westfield Seek-No-Further, $32.75*

Wickson Fall. Esopus Spitzenburg x Newtown Pippin. Albert Etter intro, Humboldt County, CA, 1944. One of the most intensely flavorful apples we list. Small roundish bright red fruit is crisp, juicy, tart, tangy and spicy. Highly recommended for dessert. Extremely high in both sugar and acid. Sugar level of the juice is around 25%. Becoming one of the most sought-after American cider apples. Makes perfect single-variety cider—the best there is! In September the tree looks like a mass of cherries. Bred and introduced by the generally unknown Albert Etter, one of America's most innovative and important fruit breeders of the 20th century. Keeps until January. Wickson bears young, heavily and most years. Blooms midseason. Z4. **ME Grown.**

184A *Wickson, $32.75*
184C *Wickson on M111, $32.75*



Williams Pride Summer. Co-op 23 [PRI 2845-1=(PRI 1018-101 x NJ50)] PRI Co-op, 1988. Probably the most popular summer apple among PRI's disease-resistant introductions. It's actually crisp, which is rare for a summer apple. Deep purple roundish-conic irregularly shaped fruit highlighted with areas of glowing rosy red and covered with a thin bloom. Light cream-colored flesh with red staining just under the skin. Firm, crisp and very juicy. Has a nice acidic blend of tart and sweet, reminiscent of Fameuse. Long ripening period means you don't have to eat them all at once. Vigorous annually bearing tree with some biennial tendency. Well shaped with strong right-angled branches that do not require careful training. Highly resistant to fireblight, cedar apple rust and sooty blotch; resistant to powdery mildew. Scab immune. Blooms early to midseason. Z4. **ME Grown.**

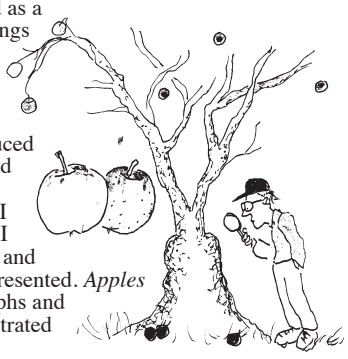
185B *Williams Pride on B118, $32.75*

Winekist Summer. Unknown parentage. Carl A. Hansen intro, Brookings, SD, 1949. Medium-sized fruit is wine red with patches and stripes of darker red and very small white dots. Flesh is even deeper red than Redfield. The very juicy coarse flesh is almost solid beet red. Very good—though extremely tart—flavor, makes a colorful and flavorful addition to fresh cider or sauce. Good fresh eating for those who like it tart. We have not fermented it, though it would be worth testing. For many years we assumed that the apple was the creation of the Winthrop, ME, fruit explorer and collector, Morris Towle. Dan Bussey's research has straightened that out. It must have come back east shortly after its introduction. Leaves are tomentose (soft and woolly) and have a dark reddish cast. Blossoms are light pink. Tree is a natural semi-dwarf. Blooms midseason. Z3. **ME Grown.**

187C *Winekist on M111, $32.75*

Read all about it!

Apples and the Art of Detection: Tracking Down, Identifying and Preserving Rare Apples by John Bunker, 2019. 407 pages, softcover. I've been listening to John talk about apples for as long as I can remember. The old varieties and why we should rescue them, the Johnny Appleseeds of America, and the shocking truth that you can't plant an apple seed and expect to get the same apple (gasp!). Because I'm an editor, I had the honor of contributing to my brother's masterpiece: *Apples and the Art of Detection*. I realized right away that this book, brilliantly framed as a Sherlock Holmes detective story, belongs not only on the shelf of anyone interested in apples; it is also for those who want to learn about the old-timey experts behind the scenes. In other words, John's mentors. We are introduced to these salt-of-the-earth characters and their apple orchards, and we fall in love with all of them. As a layperson, I especially enjoyed those sections, but I was also impressed with the precision and eloquence with which the science is presented. *Apples and the Art of Detection* has photographs and artwork galore, and is beautifully illustrated by the author himself. –Emily Bunker

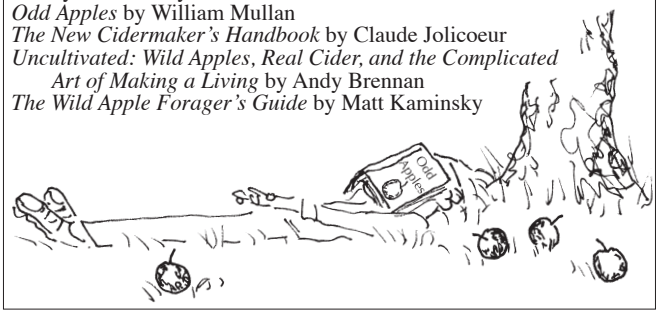


L628A *Apples and the Art of Detection, $30.00*

Recent additions to Bunker's bookshelf

Here's what John's been reading. More staff book picks on page 61.

American Cider by Dan Pucci and Craig Cavallo
The Artist and the Orchard: A Memoir by Linda Hoffman
The Illustrated History of Apples in the United States and Canada by Dan Bussey
Odd Apples by William Mullan
The New Cidermaker's Handbook by Claude Jolicoeur
Uncultivated: Wild Apples, Real Cider, and the Complicated Art of Making a Living by Andy Brennan
The Wild Apple Forager's Guide by Matt Kaminsky



Become an Apple Steward!

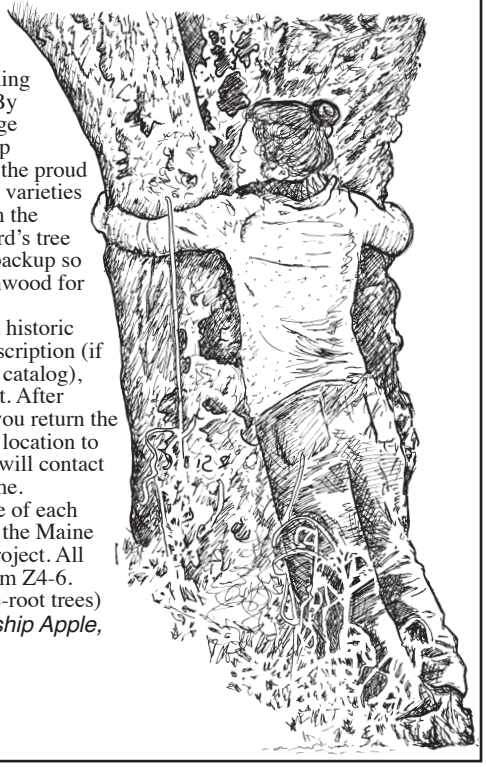
Maine Heritage Orchard Stewardship Apple The Maine Organic Farmers and Gardeners Association (MOFGA) established the Maine Heritage Orchard (MHO) in a renovated gravel pit in Unity, with the first trees planted on Earth Day 2014. MHO is home to hundreds of heirloom varieties of apples that were known to be grown in Maine dating back as far as 1630, as well as a growing collection of noteworthy, provisionally named seedling varieties grafted from impressive ancient trees found across the state. Nearly 350 apple trees have been planted so far with many more to come. The trees are managed with innovative organic practices and planted on a terraced hillside alongside native flowers and shrubs to create a polyculture orchard unlike any other. MHO is an educational resource, open to the public during various workshops, tours and volunteer days throughout the year.

You can join in this effort by becoming an Apple Steward. By purchasing a Heritage Orchard Stewardship Apple, you become the proud keeper of one of the varieties growing at MHO. In the event that the orchard's tree dies, you'll have a backup so we can collect scionwood for grafting another.

We'll send you a historic apple tree with a description (if it's not listed in this catalog), and a form to fill out. After planting your tree, you return the form with the tree's location to MOFGA. MOFGA will contact you from time to time.

$30 from the sale of each tree goes to support the Maine Heritage Orchard project. All trees best grown from Z4-6. **ME Grown.** (3-6' bare-root trees)

248A *Stewardship Apple, $55.00*



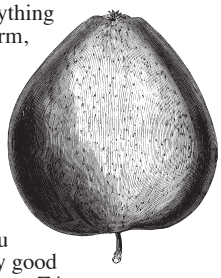
Winthrop Greening Late Summer-Fall. Ichabod Howe Farm, Winthrop, ME, before 1800. Large beautiful oblate all-purpose green fruit sporting a red-orange wash, small greenish dots and splashes of russet. Tender rich juicy flesh. Very interesting sweet flavor with medium-low acidity. One of the few Maine apples to receive attention from outside the state over the years. Quite popular throughout central Maine as late as 1920; now all but unknown. Ichabod Howe (1731–1810) laid out many of Winthrop's roads, organized construction of its first church, was an accomplished trapper and hunter, served seven terms as selectman and was, appropriately enough, Winthrop's first orchardist. Blooms late. Z4. **ME Grown.**

***189C** Winthrop Greening on M111, $32.75*

Wolf River Fall. Alexander seedling. Near Wolf River, WI, 1875. Perhaps the most famous old-time apple in Maine, likely due to its catchy name and its extremely large—even huge—round-oblate fruit. Pale yellow-green skin mostly covered with pink, deep red and bright crimson with a vivid yellowish-greenish russety splash around the stem. Creamy-white coarse flesh is firm but tender. Aromatic subacid flavor is very good for cooking. Makes an excellent baked apple and a decent pie. Not much good for fresh eating, but particularly tasty when dried. Keeps until late fall. Large moderately vigorous productive spreading tree. Excellent scab resistance. Blooms mid to late season. Z3. **ME Grown.**

***190B** Wolf River on B118, $32.75*

Yellow Bellflower Winter. Parentage unknown. Crosswicks, NJ, about 1742. Large conical pure-yellow fruit does everything well, including keeping all winter in the root cellar. Firm, crisp, moderately fine-grained, rather tender, juicy, aromatic, very good for culinary use and good for fresh eating, especially after it's mellowed for a month or two. Excellent for pies. Applesauce cooks quickly, somewhat coarse, bright glistening yellow with great flavor and chewy skins. We also love it dried: it's balanced and flavorful. One of the first named American varieties and one of the first apples to be grafted and planted in Maine. Incredibly long-lived. When you find a truly ancient apple tree in Maine, there's a pretty good chance it's a Yellow Bellflower. Blooms early-midseason. Z4. **ME Grown.**



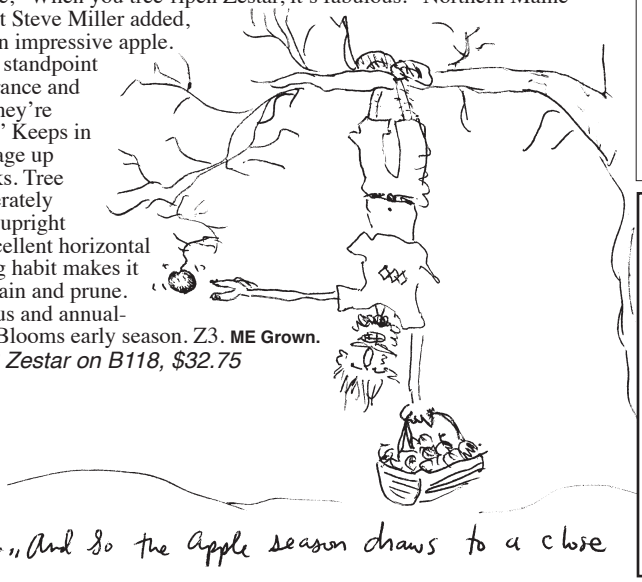
***191A** Yellow Bellflower, $32.75*

Yellow Transparent Summer. Parentage unknown. Russia, probably before 1800. Brought to the U.S. in 1870 and quickly spread throughout Maine. One of our most-requested varieties. Medium-sized light yellow fruit has a tender skin you can almost see through. Tart fresh eating and cooks up into a flavorful slightly tart light yellow sauce in 6–7 minutes. Skip the sugar. Skins will dissolve in your mouth as you eat. Transparents ripen fairly early in August and beware: they come mostly all at once and go by quickly. Get the sauce pot ready and don't blink or you might miss them. It's okay to eat or cook them a little on the green side. When the first of them fall to the ground, pick the rest within a week or so. Incredibly hardy. Blooms midseason. Z3. **ME Grown.**

***192A** Yellow Transparent, $32.75*

Zestar Late Summer. (State Fair x MN 1691) U Minn, 1999. Also called **Zestar!** Extremely hardy high-quality mid-late summer dessert apple. Medium-sized blocky round fruit covered with red stripes and blush. Juicy and crisp with a well-balanced acid-sweet flavor. Michael Phillips, New Hampshire orchardist and author of *The Apple Grower*, said to me, "When you tree-ripen Zestar, it's fabulous." Northern Maine orchardist Steve Miller added, "That's an impressive apple. From the standpoint of appearance and quality, they're first rate." Keeps in cold storage up to 7 weeks. Tree has moderately vigorous upright form; excellent horizontal branching habit makes it easy to train and prune. Precocious and annual-bearing. Blooms early season. Z3. **ME Grown.**

***193B** Zestar on B118, $32.75*



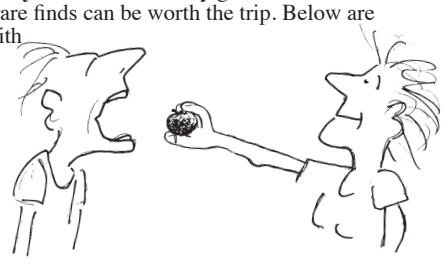
Where can I taste that apple?

While we take pride in our variety descriptions, there's nothing like the real thing. Frequently we're asked, "Where can I taste a…?" One opportunity is Great Maine Apple Day, October 17, 2021, at MOFGA in Unity. (Check mofga.org for updates.)

To try more than 20 varieties, sign up for Out on a Limb Apple CSA (outonalimbapples.com) co-managed by Fedco's John Bunker. Members receive biweekly shares of rare apples.

Visit an orchard near you. There are many great orchards out there. Even one or two rare finds can be worth the trip. Below are some Maine orchards with good collections. For a more complete list of Maine orchards, go to maineapples.org.

For a longer list of orchards around the northeast, visit fedcoseeds.com/trees and click on "Resources."



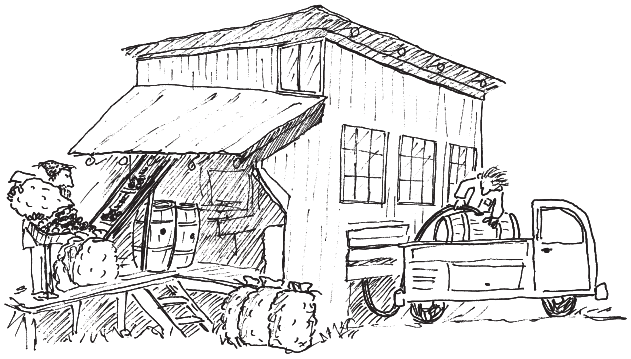
Some orchards in Maine:

- The Apple Farm, Fairfield, Somerset County (207) 453-7656, applefarm.us. A great collection of unusual old and new varieties.
- Bailey's Orchard, Whitefield, Lincoln County (207) 549-7680. One of the largest collections of old varieties in the state. Other fruits, too.
- Cayford Orchards, Skowhegan, Somerset County (207) 474-5200, cayfordorchards.com. 57 new and heirloom varieties of tree fruits.
- Clayfield Farm, East Blue Hill, Hancock County (207) 374-2159, clayfieldfarm.net. Small organic orchard of mixed varieties.
- Doles Orchard, Limington, York County (207) 793-4409, dolesorchard.com. Mix of old and new. They have two un-named varieties crossed by the late Maine plant breeder Russell Bailey. Both are extremely rare, if not unique.
- 5 Star Orchard, Brooklin, Hancock County (207) 359-4960, 5starorchard.com. Organic heirloom apples, pears, plums and peaches.
- Lane Road Orchard, New Sharon, Franklin County (774) 265-0614. Many interesting heirlooms and unusual modern varieties.
- McDougal Orchards, Springvale, York County (207) 324-5054, mcdougalorchards.com. Many unusual apple varieties.
- Maine-ly Apples, Dixmont, Penobscot County (207) 234-2043, mainelyapples.com. Excellent collection of old, new and rare varieties.
- North Star Orchards, Madison, Somerset County (207) 696-5109, northstarorchards.me. Pick-your-own apples, cider mill, and farm store.
- Pietree Orchard, Sweden, Oxford County (207) 647-9419, pietreeorchard.com. Excellent assortment of heirloom and new varieties.
- Pleasant Pond Orchard, Richmond, Sagadahoc County (207) 737-4443. Apples, pears, plums, peaches, blackberries and pick-your-own highbush blueberries.
- Ricker Hill Orchards, Turner, Androscoggin County (207) 225-5552, rickerhill.com. Organic apples and more, mostly modern varieties.
- Rollins Orchard, Garland, Penobscot County (207) 924-3504, rollinsorchards.com. More than 20 unusual old varieties.
- Sewall Orchard, Lincolnville, Waldo County (207) 763-3956, sewallorchard.com. Organic apples including some of the first disease-resistant releases.
- Sweetser's Apple Barrel and Orchards, Cumberland Center, Cumberland County (207) 829-6599, maineapple.com. A great collection of 39 old and new varieties. Don't miss their Rolfe apples.

Heirloom Apple Collections

A bundle of 5 or 10 trees to begin your own heirloom orchard. Each tree in the bundle will be a different heirloom traditionally grown in northern New England for eating or cooking. Collections may include varieties not listed in this catalog, in which case we will include descriptions. Rootstocks will be semi-dwarf and standard. Trees are individually labeled within each bundle. Sorry, collections are not customizable. All hardy to Z4. **ME Grown.**

***209A** Heirloom Apple Collection, bundle of 5, $144.00*
***209B** Heirloom Apple Collection, bundle of 10, $278.50*



Cider Apples

Each year we offer a different assortment of the best European and American cider varieties, including new wild apple introductions from local cidermakers. Many of these are NOT for fresh eating. They do however possess qualities that make them very desirable for fermented cider production. Please note the descriptions for details. We also offer crabapples suitable for cider; see page 44.

Ashton Bitter Early Fall. **Full bittersweet** cider apple. Dabinett x Stoke Red. GT Spinks intro, Long Ashton, England, 1947. Astringent cider apple with strong tannin, high sugar (SG 1.060) and low acidity. Medium-sized round opaque orange-yellow fruit, blushed and striped with red. Very juicy. Ripens in early fall, but we've pressed them in late October with good results. Best blended with sharps and other bittersweet varieties. Resurrected from an old Long Ashton trial orchard and planted extensively in recent years in England and the U.S. From 1903 until 2003, Long Ashton Research Station was the British center for the study of cider. Scab free. Blooms midseason. Z4. **ME Grown.**

***210A** Ashton Bitter, $32.75*

Binet Rouge Late Fall. **Traditional French mild bittersweet** cider apple. Unknown parentage. Probably from Normandy, France. Bore and Fleckinger classify it as sweet. (SG 1.056–1.072) Small angular fruit, somewhat oblate and truncate, with a deep red blush covering about three quarters of the fruit. Medium-to-small russeted stem area and small prominent dots. Recommended for trial in most cider-apple growing districts. Eric Shatt of Redbyrd Orchard Cider provided the scionwood. Blooms mid-late season. Probably Z4. **ME Grown.**

***212C** Binet Rouge on M111, $32.75*

Bitter Pew Fall. **Bittersharp** cider apple. Discovered and introduced by John Bunker and Laura Sieger, Palermo, ME, 2015. Mildly acidic, highly bitter and slightly astringent. Not for fresh eating! Strongly flavored juice, recommended for blending. (SG 1.048) Will add complexity and lots of pizzazz to even the dullest cider. Best pressing in the first two weeks of November. At our cider tasting in July 2018, the Bitter Pew cider received unanimous thumbs up. Medium-sized angular conic fruit, deep dark lime green with a purple-red blush and prominent whitish dots. We found the medium-aged multi-stemmed tree in the remnants of an old orchard. When one of the old trees died decades ago, the rootstock sprouted and like a phoenix rose this wonderful tree. Now on trial in multiple locations. Blooms midseason. Probably Z4. **ME Grown.**

***213C** Bitter Pew on M111, $32.75*

It's All in the Mix!

"From the great diversity of soil and climate in the United States of America, and the almost endless variety of its apples, it followed that much diversity of taste and flavor will be necessarily found in the cider that is made from them." –Colin MacKenzie, 1829

For the best cider, plant several varieties. That's because when it comes to cider, it's all in the mix. Unlike beer, cider usually has only one ingredient: apples. They provide everything: acidity, sugar, tannin and flavor.

We classify the cider varieties into four categories: **sharp** (low in tannins, high in acid), **sweet** (high in sugar, little or no tannin, low acid), **bittersharp** (high in tannins and high acid) and **bittersweet** (high tannins and sugar, low acid). **Tannin** denotes naturally occurring compounds whose bitter astringency gives rounded full flavor, body and golden color. What's the difference between bitterness and astringency? An excellent University of Reading publication *Sustainable Cider Apple Production* attempts to define them: "Astringency is a drying, puckering sensation in the mouth in which the whole tongue is affected, while bitterness is mostly perceived at the sides and back of the tongue."

Vintage refers to varieties with perfect qualities for single-variety cider. Most cider is best blended.

We recommend you plant some sharp apples for acidity, some sweet apples for sugar and some bitter apples for the tannin. Our best cider has been from about 40% bittersweet (astringent) apples and 60% mixed dessert and cooking apples.

Bramtot Fall. **Bittersweet** cider apple. Thought to be a seedling of the old variety Martin Fessar. M. Legrand intro, Yvetot, France, 1872. Brought to England by the Woolhope Naturalists Field Club in 1884. Not for fresh eating but an excellent bittersweet for blending in hard cider. Juicy firm cream-colored quite bitter very astringent flesh has a very high sugar content. (SG 1.069, acidity 2.3g/L, tannin 3.5g/L) Steve Wood of Poverty Lane Orchards and Farnum Hill Ciders in Lebanon, NH, called it "a lovely little apple with nice juice, interesting, aggressively tannic." Small conic green partially russeted fruit with a dull orange blush. Not very well known and rarely included in the literature. Blooms mid-to-late season. Z4. **ME Grown.**

***214A** Bramtot, $32.75*

Bulmer's Norman Fall. **Medium bittersweet** cider apple. France, early 1900s. Bulmer's is to cider in the U.K. as Budweiser is to beer in the U.S. In the early 19th c. H.P. Bulmer & Co. began planting orchards in Hereford, and this unknown variety imported from the Normandy region of France quickly became a cidermaking favorite. The large irregular yellow-green fruit features hard and bitter tannins and presses into a juice that ferments quickly—excellent for commercial cider production. The Bulmer Cider Co. played a large role in the development of English cider production and apple varieties, and Bulmer's Norman was grafted and planted widely. These extremely vigorous trees were also known as "stem builders" and used as a rootstock for other varieties. Triploid: not suitable for pollinating other varieties. Blooms mid-to-late season. Z4. **ME Grown.**

***215A** Bulmer's Norman, $32.75*

Chisel Jersey Late Fall. **Full bittersweet** cider apple. Martock, Somerset, England, 19th c. One of the most famous of the Somerset bittersweets. Best blended with other apples, it makes a strong rich cider. Medium acidity, highly astringent, harsh and high in tannins. (SG 1.068, acidity 2.2g/L, tannin 4g/L) Round to slightly conic slightly greasy fruit, colored with a beautiful combination of dull opaque reds, yellows and russets. In old English *chesil* means 'pebble'—Chisel Jersey is small, hard and bitter! Spreading tree may require encouragement to develop a strong central leader. Consistent cropper. Closely related to Dabinett; they should not be relied on to pollinate one another. One source recommends Harry Masters Jersey as a good companion for pollination, but as usual, most other apples should do the job. Late bloomer. Z4. **ME Grown.**

***216C** Chisel Jersey on M111, $32.75*

Counting Machine Fall. **Bittersweet** cider apple. Gene Cartwright, Whaleback Cider intro, Fox Islands, ME, 2019. Discovered in a thicket of seedling apple trees on one of Whaleback's fruit exploring and foraging excursions in the Penobscot Bay. Gene recalls the mother tree "had never been pruned, and in its wild state had a willowy growth habit, both spur and tip bearing, with soft, supple yellowish wood…bearing profusely in that abundant harvest of 2019." Small-to-medium round crabapples with thick skin, copper-orange over a yellow base and a bit of russet. Could be eaten fresh, but the mild tannins and complex floral aroma make this a wonderful cider apple. Growing vigorously in one of our central Maine nurseries and recommended for trial. Blooms midseason. Probably Z4. **ME Grown.**

***218A** Counting Machine, $32.75*

John and Cammy's Simple Hard Cider

Apple juice wants to ferment. Although there are many books, websites and conferences devoted to hard cider, the process is quite simple.

Any apples will do. Our best ciders come from a mix of different apples. We combine wild seedling apples, small and somewhat bitter, with sweet low-acid apples like Tolman Sweet or Pound Sweet, and bittersweets like Dabinett, Yarlington Mill, or other cider varieties.

A bushel of apples will yield about 3.5 gallons of juice. You can buy, borrow or build a cider press. You could also buy fresh cider from a local orchard in the fall.

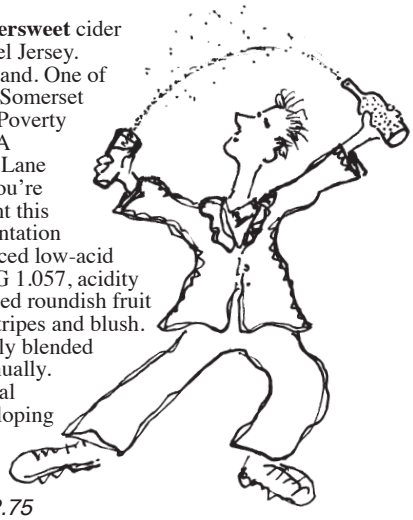
Pour juice into a clean container, such as a glass gallon jug, a 5-gallon carboy, or a 50-gallon wooden whiskey or wine barrel. We clean our fermentation vessel with potassium metabisulfite, available at beer/wine supply stores.

Some cidermakers add yeast. Others add raisins, brown sugar, various fruits or even a piece of steak. Our cider is just juice. The natural yeasts on the farm are enough to make great cider.

Seal the vessel with an airlock. When the airlock stops bubbling, the fermentation is done. This takes several months in the cool basement where we ferment our cider.

Time to drink the cider or bottle it. We like to bottle ours and wait another few months because it keeps getting better. Sometimes we add 3/4 tsp sugar to each bottle to make the cider fizzy. Twist-top wine bottles or flip-top bottles are easy because you don't need to purchase bottle caps or corks. Enjoy!

Dabinett Late Fall. **Medium-bittersweet** cider apple. Probably a seedling of Chisel Jersey. Middle Lambrook, Somerset, England. One of the most popular cider varieties in Somerset today and one of the mainstays of Poverty Lane Cider Orchards. At a MOFGA workshop, Steve Wood of Poverty Lane and Farnum Hill Ciders said, "If you're going to plant one bittersweet, plant this one." Sugar content fair and fermentation moderate. High-quality well-balanced low-acid cider with a soft-tasting tannin. (SG 1.057, acidity 1.8g/L, tannin 2.9g/L) Medium-sized roundish fruit covered with brownish brick-red stripes and blush. Picked last week of October, usually blended with other late varieties. Crops annually. Grower-friendly tree with flat lateral branches may require help in developing a strong central leader. Not pollen compatible with Chisel Jersey. Midseason bloom. Z4. **ME Grown.**



***219C** Dabinett on M111, $32.75*

Ellis Bitter Early Fall. **Medium bittersweet** cider apple. Newton St Cyres, Devon, Somerset, England. Particularly useful for its early ripening, adding valuable bitterness to early-season cider pressings. (SG 1.033–1.053, acidity 2g/L, tannin 2.4g/L) Blend with other early dessert apples or cider varieties. Large oddly conic fruit, sometimes ribbed, mostly striped and blushed with red. White-fleshed, sweet, crisp and juicy. Soft, astringent, tannic. Still grown in England's West Country cider orchards and now being planted in the U.S. Fast-growing large upright rangy open vigorous tree produces regularly. Midseason bloomer. Z4. **ME Grown.**

***220C** Ellis Bitter on M111, $32.75*

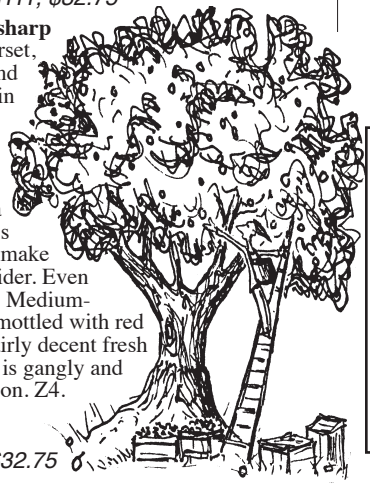
Harrison Mid-Late Fall. **Vintage sharp** cider apple. Parentage unknown. South Orange, Essex County, NJ, as early as 1712. One of the most renowned American cider apples, dating from the early days of domestic cidermaking. Harrison cider was famous and considered to be better than champagne. Medium-small oval yellow-skinned fruit. Rich firm dry yellow flesh. According to William Coxe in 1817, it makes a "high coloured, rich, and sweet cider of great strength, commanding a high price in New-York, frequently ten dollars and upwards per barrell." Vigorous productive tree. A Harrison revival is underway in several locations on the East Coast. Performing well in our central Maine trials. Appears to be plenty hardy. Blooms mid-to-late season. Z4. **ME Grown.**

***223A** Harrison, $32.75*
***223C** Harrison on M111, $32.75*

Hewe's Virginia Crab Fall. **Sharp** cider apple. Probably a seedling of the native *M. angustifolia*, the Southern Crab. Introduced about 1700 in Virginia. One of the most prized of all American cider apples. One of the rare varieties recommended for single varietal cider. In his 1817 *A View of the Cultivation of Fruit Trees*, William Coxe devoted an entire chapter to making cider with Hewe's. The red-skinned white-spotted fruit is small, round, juicy, tough, astringent and acidic. According to AJ Downing in 1848, Hewe's "makes a very high-flavored dry cider, which, by connoisseurs, is thought unsurpassed in flavor by any other, and retains its soundness a long time." Incredibly vigorous, productive and healthy in our trials. The trees look great. Evidently it loves cold weather. Quite hardy despite its name. Long ago used as a rootstock even as far north as Maine. Blooms midseason. Z4. **ME Grown.**

***225A** Hewe's Virginia Crab, $32.75*
***225C** Hewe's Virginia Crab on M111, $32.75*

Kingston Black Fall. **Vintage bittersharp** cider apple. Parentage unknown. Somerset, England, early 19th c. High in tannin and acidity. (SG 1.061, acidity 5.8g/L, tannin 1.9g/L) Produces full-bodied vintage cider with a nice blend of acid, tannins and sugar. One of the noteworthy varieties that makes a high-quality single variety hard cider; also good in a blend. We became fans of Farnum Hill's tasty Kingston Black varietal. Now we make it ourselves. Also makes superb fresh cider. Even the fresh juice is a deep rich dark color. Medium-sized conical beautiful rich red fruit is mottled with red russet and deeper shades of maroon. Fairly decent fresh eating. The tree is a reliable bearer, but is gangly and needs careful pruning. Blooms midseason. Z4. **ME Grown.**



***226A** Kingston Black, $32.75*
***226C** Kingston Black on M111, $32.75*

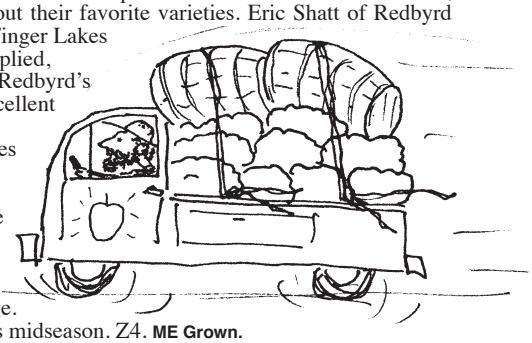
Medaille d'Or Late Fall. **Full bittersweet** cider apple. Parentage unknown. Developed by M. Goddard of Boisguillaume, Rouen, France, probably mid-19th c. The gold medal of cider apples, introduced into England in 1884. Full bittersweet, high in bitterness and astringency. (SG 1.053-1.059, acidity 2.1-2.7g/L, tannin 4.4-6.4g/L) Combine with other late varieties. Small-to-medium roundish-conic yellow fruit mostly covered with a netting of golden russet and sometimes featuring a soft reddish blush. Wide spreading vigorous tree with good branch angles. Scab resistant but said to be susceptible to fireblight. Blooms late season. Z4. **ME Grown.**

***227A** Medaille d'Or, $32.75*

Otterson Fall. **Bittersharp** cider apple. Unknown parentage, entered into USDA apple germplasm repository in 1992. Rediscovered and cultivated at Michigan State U by plant geneticist Dr. Steve van Nocker and botanist Chris Gottschalk, who have done extensive research and trials on red-fleshed apple varieties and started the Michigan PureRed breeding program. Otterson was selected as one of the best from more than a hundred varieties for its size, vigor and disease resistance, as well as its deep red juice, high in anthocyanins and antioxidants. Medium-sized round fruit are DARK red inside and out. Otterson has been successfully pressed and fermented into rosé cider by cidermakers, winning honors at the Great Lakes International Cider and Perry Competition. On trial around the U.S. and growing well in one of our local Maine nurseries. Highly ornamental purple-red foliage and pink flowers. Early to midseason bloomer. Z4. **ME Grown.**

***228A** Otterson, $32.75*

Porter's Perfection Late Fall. **Medium bittersharp** cider apple. Charles Porter intro, East Lambrook, near Kingsbury Episcopi, Somerset, England, before 1900. Heavy cropper of small dark red-blushed fruit. (SG 1.054, acidity 8.2g/L, tannin 2.5g/L) Liz Copas writes that it "can produce an excellent cider. Its juice is rather acidic bittersharp and is better blended for a more balanced product." When I meet cidermakers, I always ask them about their favorite varieties. Eric Shatt of Redbyrd Orchard Cider in the Finger Lakes region of New York replied, "Porter's Perfection." Redbyrd's website calls it an "excellent balance of tannins and acidity." Often produces twins or triplets—two or more fruits fused together. Similar to the excellent Lambrook Pippin; the two varieties are thought to be of same parentage. Scab resistant. Blooms midseason. Z4. **ME Grown.**



***229A** Porter's Perfection, $32.75*
***229C** Porter's Perfection on M111, $32.75*

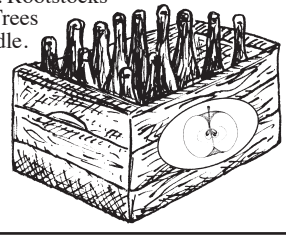
Redfield Fall. **Bittersharp** cider apple. See page 11 for description.

Wickson Fall. **Vintage sharp** cider apple. See page 14 for description.

Yarlington Mill Fall. **Medium-bittersweet** cider apple. Yarlington, near North Cadbury, Somerset, England, 1898. Rich brown low-acid juice, mildly aromatic, fruity and not aggressively tannic. Above-average sugar content. (SG 1.053-1.075, acidity 2.2g/L, tannin 3.2g/L) Slow to medium fermentation. Medium-sized yellow distinctly conic fruit with a pinkish blush and overspreading darker red stripes. Considered an all-round excellent cider variety: reliable, productive and adaptable to varying conditions. We've heard reports of it thriving in Zone 3. Steve Wood's other favorite bittersweet (see Dabinett). Highly recommended for home and commercial cider plantings. You may need to head back the leader in early years to encourage strong laterals. Midseason bloomer. Z3/4. **ME Grown.**

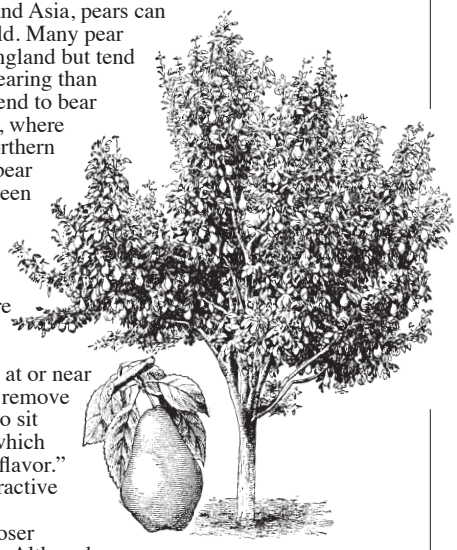
***232C** Yarlington Mill on M111, $32.75*

Hard Cider Apple Collections **A bundle of 5 or 10** trees to begin your cider orchard. Includes an assortment of bittersharp and bittersweet apples. Collections may include varieties not listed in this catalog, in which case we will include descriptions. Rootstocks will be either semi-dwarf or standard. Trees are individually labeled within each bundle. Sorry, collections are not customizable. All hardy to Z4. **ME Grown.**



***247A** Hard Cider Apple Collection, bundle of 5, $144.00*
***247B** Hard Cider Apple Collection, bundle of 10, $278.50*

Pears *Pyrus communis*



Native to temperate Europe and Asia, pears can grow up to 100' tall in the wild. Many pear varieties are hardy in New England but tend to take longer to come into bearing than apples. Farther south, pears tend to bear annually. However, in Maine, where they are approaching their northern limit, some varieties tend to bear biennially. Pick fruit when green and ripen it on the shelf. Or, for optimal eating, try Ed Fackler's method: "…when fruits exhibit slight color changes, begin to test pressure (using your thumb) near the stem. When there is a slight 'give,' pick all the fruit, store at or near 35° for 7 or more days. Then remove them as needed, allow them to sit at room temps for 2–4 days which allows them to ripen to peak flavor."

Pear blossoms are less attractive to bees than apple blossoms, so pears should be planted closer together to ensure pollination. Although some pears appear to be self-pollinating, **we recommend a second variety for pollination.** Bloom dates for all varieties are similar.

Pears are on OHxF97 rootstock and will reach 25' or taller at maturity; plant 15–20' apart. (2½-6' trees)

Bartlett Late Summer. Seedling found in Aldermaston, England. Introduced to the U.S. in the late 1700s. Also known as **Williams' Bon Chrétien**. The most widely planted and well known of all pears, accounting for 75% of the U.S. commercial crop. Adaptable to many climates and soils. Large classic pear-shaped greenish-yellow fruit; very good quality. Full reliable annual crops. Might be iffy north of Bangor. Large vigorous easy-to-grow long-lived tree bears young. Susceptible to fireblight. Good pollinator for Asian Pears. Z4. **ME Grown.**

***265A** Bartlett Pear, $32.50*

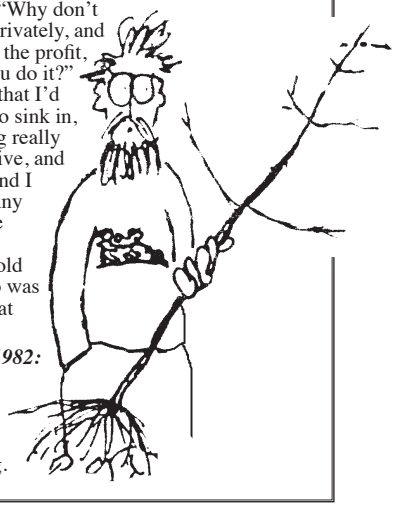
Beurre Clairgeau Mid-Late Fall. Pierre Clairgeau intro, Nantes, France, circa 1830. Large Bartlett-shaped yellow fruit with a beautiful red blush sprinkled with russet. At its best, the fruit is richly flavored, melting, buttery, juicy, sweet and aromatic. Brought to the U.S. around 1854, Clairgeau found its niche for canning and other cooking. The trees are beautiful, vigorous, unusually upright, healthy, very productive, bearing young and annually. Quickly spread throughout New York and New England up into Maine, becoming a mainstay of American pear growing at that time. Now mostly forgotten—we're pleased to be bringing it back. Z4. **ME Grown.**

***266A** Beurre Clairgeau Pear, $32.50*

1982: Fedco Seeds moves to its first chicken barn; Bunk has an idea.
Bunk: Thirty years ago…a lot of the old orchards that had been planted in the early part of the 20th c. or the late part of the 19th c. were still there and still producing beautiful crops, but they were beginning to be on their way out. So I started thinking, well, we need to leave something for the people who come after us, and we can't simply be endlessly foraging free apples around Waldo or Kennebec County. We need to be doing something so that the foragers of the future, the people that we don't know, will have something for them.

A number of friends of mine said, "Why don't you start your own nursery and do it privately, and that will be yours, and you will derive the profit, and you can have control over how you do it?"

Now this Fedco Seeds connection that I'd had for two or three years had begun to sink in, and I decided that there was something really good about doing things as a cooperative, and about owning the business together. And I still feel that way: There are many, many things—and things that I didn't realize then—that I see even more now. So, contrary to what a number of people told me, I decided that what I wanted to do was start another division of Fedco, and that would be Fedco Trees.



from Bunk's journal, December 18, 1982:
I met with CR and Gene Frey. They encouraged my commitment to Fedco Trees. They gave lots of helpful advice and wholeheartedly supported my efforts. It was an uplifting meeting. There is much to do however.

Bosc Fall. Seedling introduced by Van Mons, Lourain, Belgium, 1807. Also called **Beurre Bosc**. Long-necked fruit is dark rich yellow covered with cinnamon-brown russet. Distinctive sweet rich spicy buttery flavor. Melting juicy tender white flesh has smooth texture and a pleasing aroma. Somewhat gritty around the core. Large vigorous upright spreading tree bears huge crops annually. Good pollinator for other varieties. A longtime favorite throughout central Maine. Z4. **ME Grown.**

***267A** Bosc Pear, $32.50*

Cabot Vermont Fall. An old dessert pear, circa 1850, discovered in Cabot, VT, a few miles west of the New Hampshire border and about as far north as Bangor, ME. A superior dessert pear with medium-large pear-shaped fruit. Yellowish skin has a slight reddish blush. Yellowish sweet flesh is coarse grained, extremely juicy, with no grit cells. Not only is it a delicious dessert fruit, it is also remarkable for its very rare "double" flowers. Highly ornamental! Introduced to us many years ago by Armando Bona of Passumpsic, VT. Not to be confused with the old Massachusetts pear Cabot. Annual and self-pollinating. Very hardy. Z4 or possibly even Z3. **ME Grown.**

***269A** Cabot Vermont Pear, $32.50*

Clapp Favorite Mid-Late Summer. Thought to be Bartlett x Flemish Beauty. William Clapp intro, Dorchester, MA, 1840. Hardy pear common in Maine for well over 100 years. Very juicy melting sweet fruit with that absolutely perfect pear flavor for fresh eating. Medium-large fruit is pale lemon yellow, mottled bright red. Round-bodied with a short neck. Medium-firm fine-textured with granular center. Pick before completely ripe and finish indoors (tendency to soften at the center after ripening). Makes a great pear wine. Z4. **ME Grown.**

***270A** Clapp Favorite Pear, $32.50*

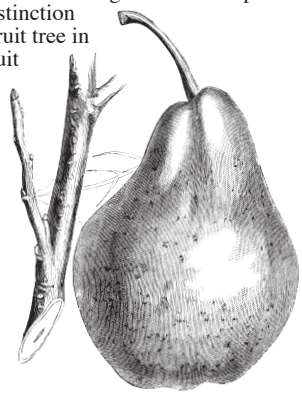
Columbia Fall. Originated on the Casser farm, Westchester County, NY, about 1835. Good dessert pear, and excellent for canning or sauce. Large yellowish-green oblong fruit has yellowish-white granular sweet juicy flesh. Similar in appearance to Bartlett. Large vigorous spreading productive tree fruits very heavily every other year. Our scionwood comes from an old tree in the front yard of the Palermo Historical Society. Year-round it's a majestic sight, especially in fruit. People from all over stop by and put the fruit to good use. Z4. **ME Grown.**

***271A** Columbia Pear, $32.50*

Dana Hovey Winter. Thought to be a seedling of Seckel. Roxbury, MA, about 1854. Introduced by 19th-c. fruit enthusiast Francis Dana who dubbed it "Dana's Hovey" in honor of CM Hovey, Boston nurseryman and author of *The Fruits of America*. Sometimes called **Winter Seckel** because of its similarity to Seckel. Small squat rich golden-yellow russeted fruit. Intensely sweet highly aromatic tender storage pear has excellent flavor; possibly the best eating of all winter pears. Keeps extremely well. Harvest in October and store in a cool dry spot. Still great eating in December—sometimes even as late as February. Hardy vigorous moderately productive spreading tree adapts to a variety of soils. No scab and relatively few bugs. Z4. **ME Grown.**

***273A** Dana Hovey Pear, $32.50*

Endicott Fall. Orchard Farm, Naumkeag, MA, circa 1630. Planted from seed in either 1630 or 1632 by the first Colonial Governor of Massachusetts, John Endicott. The incredible original Endicott pear tree, nearly 400 years old, has the distinction of being probably the oldest living fruit tree in America. Medium-sized roundish fruit is greenish yellow, dotted and splashed with russet. Moderately tasty fresh eating and also good for perry (pear wine). In his 1825 *The American Orchardist*, James Thacher writes, "From the pear is prepared a pleasant liquor, known under the name of perry..." Endicott was an avid gardener who grew hundreds of fruit trees on his 300-acre Orchard Farm in what is now Danvers. The ancient gnarled and twisted pear tree is all that remains. Z4/5. **ME Grown.**



***275A** Endicott Pear, $32.50*

Gourmet Late Summer. SD F15 x Ewart. SD State U, 1988. If you like the idea of Asian pears but have been deterred by lack of flavor and hardiness, try Gourmet. Although similar in texture to Asian pears, Gourmet's sweet yellow flesh has more flavor and less wateriness. It's a crisp pear that melts in your mouth. We're big fans. Greenish-yellow thick tender skin with russet dots on 2" long fruit. A very nice unusual addition to the mix of summer harvests. Produces a good crop in our orchard annually. Very hardy medium-sized upright tree. Sterile pollen; will not pollinate other trees. Z3. **ME Grown.**

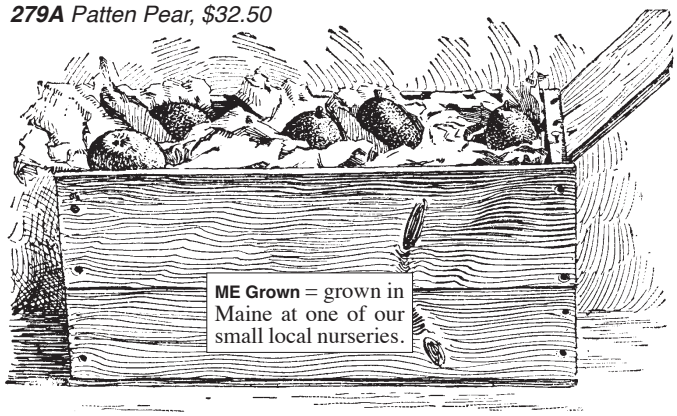
***276A** Gourmet Pear, $32.50*

Kaspar's Winter Late Fall-Winter. Frankendorf, Germany. Very good tough-skinned storage pear—will keep until April in the root cellar. Greenish-mottled medium-small pear-shaped fruit with some russet splashes or dots. Coarse flesh with a good flavor. Very hard off the tree; don't begin to eat them until a month after picking. Years ago this nameless winter pear found its way from the roadside near Frankendorf to Unity, ME. The name came later, courtesy of grower Howard Wulf who calls it "the latest-keeping pear I've ever seen." Sturdy adaptable hardy precocious tree. Recommended for those who want pears into January. Z4. **ME Grown.**

***277A** Kaspar's Winter Pear, $32.50*

Patten Late Summer. Orel 15 x Anjou. CG Patten intro, Iowa St U, 1922. Very good fresh eating with sweet "high flavor." Fine-grained soft flesh has minimal grit cells. Vaguely reminiscent of Bosc in size and shape. Good canning pear. Tree is extremely adaptable, growing all over the Northeast. Long willowy very flexible branches won't break even under the weight of its heavy crops. Fared incredibly well during the cold "test winter" several years ago when hundreds of northern Maine pear trees died to the roots. Extremely hardy and highly recommended for coldest districts. A good pollinator for other varieties. Scab resistant. Z3. **ME Grown.**

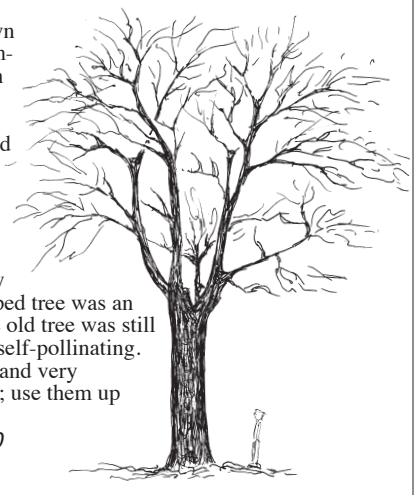
***279A** Patten Pear, $32.50*



Seckel Late Summer. Seedling near Philadelphia, PA, early 1800s. Sometimes called **Sugar Pear**. Often considered the best-flavored of all pears; even the skin is delicious. Small squat fruit is russeted yellowish-brown with slight red blush. Juicy, spicy, distinctive and aromatic. Eat ripe off the tree, or pick firm and ripen later. We use Seckels to make our baked pear sauce. It's wonderful. Very productive annual-bearing large tree, easy to grow. The most reliably bearing pear tree we have in our home orchard. Scab and fireblight resistant. Z4. **ME Grown.**

***280A** Seckel Pear, $32.50*

Stacyville Late Summer. Unknown parentage. Stacyville, ME. Medium-sized pears are light yellow with an orange to greyish-red blush. The sweet fruit has a delicious citrusy aftertaste. Although the fruit is good fresh eating, we prefer to cook it. Precocious and productive with large crops most years. Long ago, friends told John about this pear growing in Stacyville in southern Aroostook County. When he finally saw it, he thought the 50' vase-shaped tree was an elm! Held together with cables, the old tree was still bearing huge crops. Appears to be self-pollinating. Disease resistant, extremely hardy and very vigorous. They don't keep for long; use them up quickly! Rare. Z3. **ME Grown.**



***281A** Stacyville Pear, $32.50*

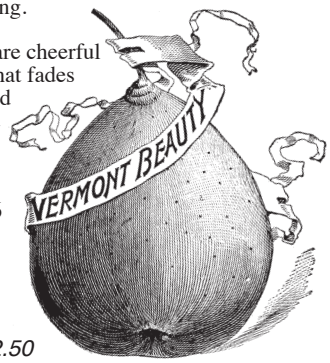
Pear Leaf Blister Mite

Pear leaf blister mites can sometimes be a problem for pear growers in the U.S. The tiny mites overwinter under the budscales and become active in spring. They are too small to see with the naked eye, but you'll know you have them if pear foliage looks like it has red blisters that eventually turn black. We recommend a dormant oil spray in spring just before the pears leaf out. You can also do a sulfur spray in the fall. (Apply appropriately, with protection. Read labels.) As a precaution, we spray Fedco pear trees with Organic JMS Stylet-Oil in the spring before shipping. You'll find organic treatments for fruit trees in our **Seeds & Supplies catalog**, or at fedcoseeds.com/ogs. We have noticed that trees often outgrow the infection even if you do nothing at all.

Tyson Summer. Jenkintown, PA, about 1794. The definitive 1921 text *The Pears of New York* calls Tyson's flavor "second only to Seckel," and says that the "tree is the most nearly perfect of any pear grown in America." Medium-sized roundish deep dull-yellow fruit with some russeting and no blush ripens not long after Bartlett. Local lore suggests Jonathan Tyson discovered it in a hedgerow on his farm west of Jenkintown, or maybe on the grounds of the Abington Friends School. Widely planted here in Maine for generations. Our scionwood comes from a huge spreading specimen in nearby Freedom. Well over 100 years old, the annually productive tree lived through all the great winters of the 20th century. Z4. **ME Grown.**

***282A** Tyson Pear, $32.50*

Vermont Beauty Fall. Chance seedling. Grand Isle, VT, about 1860. Alluringly attractive medium-sized oblong fruits are cheerful lemon yellow with a bright red blush that fades into pinkish-red dots. Don't let the good looks freak you out. The yellow-tinged flesh is tender, melting, smooth, dense, fine-grained and juicy, with very few grit cells. Excellent dessert pear that ripens after Seckel and keeps for 5 or 6 weeks. *The Pears of New York* reports that these medium-to-large healthy productive vigorous upright spreading trees "rejoice in vigor and health." Z4. **ME Grown.**



***283A** Vermont Beauty Pear, $32.50*

Vigilance!

Gardening never has been for the faint of heart. A little plant gets a good start with all the best care you can give it. Then, a few gnawing bugs appear. Later, some shriveling and browning of the leaves. Web nests and…what is that gummy stuff oozing from the trunk?!

In many cases, these are aesthetic issues that come and go. If the plant seems mostly healthy and is growing, we take a do-nothing approach. There is always something chewing on this or that. Follow the growing instruction in the back of this catalog to head off the most common issues, such as the dreaded apple borer.

However, there are a few more serious issues worth educating yourself about so you can respond quickly and prevent or reduce their impacts. As climate changes, fireblight and browntail moth caterpillars have become major challenges to orchards in Maine. We're having success controlling these plagues without chemicals. Don't lose heart!

Fire blight bacterium (*Erwinia amylovora*) has been around for a long time and has been managed by culling out the affected limbs and trees. It's taken off more rapidly in recent years. Symptoms include blackening blossoms, sudden wilting of young shoots, and sunken cankers on the stems. All plants in the Rose family are susceptible. Wet or warm humid weather during blossoming increases its spread. Left unchecked, fire blight can kill the tree. If you are vigilant, you can prevent it from going systemic by following these tips:

- Promptly cull out symptomatic branches. Cut aggressively, 16–18" back to healthy green tissue. Burn infected branches.
- Sanitize your tools with rubbing alcohol.
- Don't prune when the canopy is wet; wait for a stretch of dry days so the cuts can dry out before any chance of reinfection.
- Feeding young trees too much nitrogen causes excessive growth and can make them more susceptible.
- Don't bother spraying: use of streptomycin has led to widespread resistance to the antibiotic.

More info: extension.unh.edu/resource/fire-blight-fact-sheet

Browntail moth (*Euproctis chrysorrhoea*) is spreading in Maine. The caterpillars defoliate oak, apple, pear, cherry, juneberry and others. This isn't the browntail's first rodeo—a hundred years ago it wreaked havoc in Maine, but populations died back during wet cold springs when a fungus flourished that attached to the caterpillar. Keep an eye on your trees and shrubs and look for the ravenous caterpillars with two orange dots on their backs.

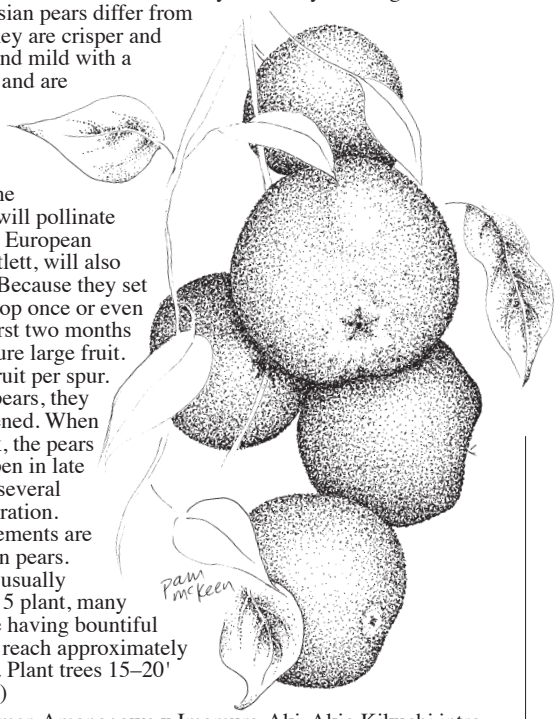
The best way to control browntail in the orchard is to prune out nests and either burn them or drown them in soapy water. Caterpillars build their messy nests at branch tips—these are best spotted in winter and look like leaves that haven't fallen off the tree. Staff at the Maine Heritage Orchard (see page 14) pruned out the nests within reach in the orchards, and then used a shotgun to blast out nests up higher in the oaks. Not the most elegant solution, but it worked!

More info: maine.gov/dacf/mfs/forest_health/invasive_threats/browntail_moth_info.htm

The Maine Forest Service is tracking caterpillars infected with the fungus that helps control their population. If you find caterpillars with a swollen appearance and a whitish-yellowish dust, report it here: surveymonkey.com/r/9VKYFLV

Asian Pears *Pyrus pyrifolia*

There are thousands of named Asian pear cultivars in China, where they have been grown for more than 2000 years. They are long-lived and bear young. Asian pears differ from European pears: they are crisper and very juicy, sweet and mild with a nutty background, and are roundish in shape. **Although partly self-fruitful, pollinators are recommended.** The varieties we offer will pollinate one another. Some European pears, notably Bartlett, will also act as pollinators. Because they set heavily, thin the crop once or even twice during the first two months after bloom to ensure large fruit. Leave about one fruit per spur. Unlike European pears, they should be tree-ripened. When the seeds are black, the pears are ready. They ripen in late summer and keep several weeks with refrigeration.



Cultural requirements are similar to European pears. Although they are usually considered a Zone 5 plant, many of us in Zone 4 are having bountiful crops. Asian pears reach approximately 15–20' at maturity. Plant trees 15–20' apart. (2½-6' trees)

Niitaka Late Summer. Amanogawa x Imamura-Aki. Akio Kikuchi intro, College of Agriculture, Tottori, Japan, 1927. Large roundish orange-brown russeted fruit with sweet crisp juicy flesh. Candy-sweet with aromatic flavors of caramel. Great for fresh eating and canning. Medium to low vigor, very upright, highly productive. Stores 2 months. Z4/5.

***297A** Niitaka Asian Pear, $32.50*

Shinko Fall. Nijisseiki seedling, Japan, 1941. *Shinko* means 'new success' in Japanese. Yellowish flesh is sweet, crisp and juicy, with very good flavor. Medium-large lumpy round brownish russeted fruit ripens late and stores up to 3 months. Moderately vigorous precocious annually bearing tree. In addition to the other Asian pears, Bartlett is also a good pollinator for Shinko. Fireblight resistant. Z4/5.

***299A** Shinko Asian Pear, $32.50*

Shinsui Summer. Kikusi x Kimizukawase. Hort Res Stn, Yatabe, Japan, 1967. Medium-sized round-oblate yellowish-brown russeted fruit with crisp juicy fine-textured very sweet flesh. One of the earliest to ripen each year. Pennsylvania grower and Asian pear aficionado Ike Kerschner considers this a great pear. Keeps about 6 weeks in refrigeration. *Shinsui* is translated as 'new water,' 'adoration,' 'inundation' and more. It is also the pseudonym of one of Japan's most famous 20th-c. artists, Ito Shinsui (1888-1972). Z4/5.

***300A** Shinsui Asian Pear, $32.50*

Yoinashi Fall. Fowler Nurseries intro, Newcastle, CA, about 1987. Fine-textured off-white flesh is crisp, juicy, aromatic and sweet. Large conic light brown russeted fruit. Means 'good pear' in Japanese. It is a good variety! One of the folks at Fowler Nurseries described it to us as having "a little bit of a zip" to it. Harvest after Hosui (which we've offered in the past) and before Shinko. Upright medium-vigorous tree. Moderate tolerance to fireblight. Z4/5.

***301A** Yoinashi Asian Pear, $32.50*

1983: The Fedco Trees catalog is born.
Bunk: "I wrote our first catalog in the summer and typed it out on a friend's typewriter in Benton: three sheets of paper stapled together in the corner…

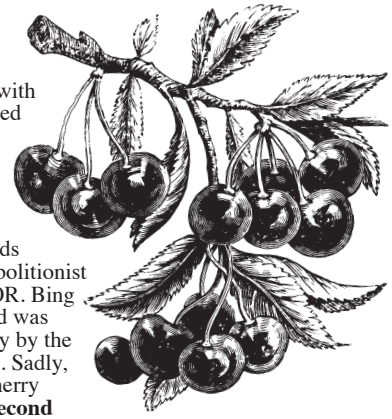
We offered 58 different items… The only graphic was of two side-by-side pine trees in mirror image of one another. The model for the drawing was a pine tree outside the Reynolds Road warehouse. That tree died and was cut down about 30 years later. On October 14, we mailed out the 1984 catalog… with an order deadline of early December. The early deadline gave us time to assemble the order and then adjust the supply up or down.

Stone Fruits *Prunus* spp.

Widely cultivated around the world and adaptable to most of New England. Not highly particular as to soils. Clingstone means the fruit's flesh clings to the pit (or stone) and a freestone pit drops away from the flesh.

Sweet Cherries *P. avium*

Generally grow into large trees although the flowers are tender and fruiting can be iffy in central Maine and north. We are testing some of the hardiest varieties and hope to have more available in coming years. **Most sweet cherries need a second variety for pollination.** See descriptions for pollination requirements. We recommend planting two or more varieties for best results. Mature trees reach 25–30' tall. Space trees 25' apart. (2½-6' grafted trees)



Bing Summer. OP cross between Black Republican and Royal Ann. Lewelling intro, OR, 1875. Large, firm, meaty, with deep crimson skin and purple-red flesh that bursts with flavor. Excellent fresh or preserved. Semi-freestone. Named for Ah Bing, who came to the U.S. in 1855 and for 35 years was foreman in the fruit orchards owned by the Lewellings, an abolitionist Quaker family in Milwaukie, OR. Bing returned to China for a visit and was denied re-entry into this country by the Chinese Exclusion Act of 1882. Sadly, he faded into history, but his cherry became timeless. **Requires a second variety for pollination.** Z5.

***303A** Bing Cherry, $32.75*

Lapins Summer. Van x Stella. Summerland Res & Dev Ctr, BC, Canada, 1983. Large sweet high-quality black-mahogany-red–skinned fruit. Ripens a week after Stella, by mid-July in warmer districts. Very vigorous, productive and upright; crops consistently in central Maine. **Self-pollinating**, but benefits from planting with another variety. Z4/5.

***304A** Lapins Cherry, $32.75*

Leningrad Summer. Possibly Black Eagle x Black Tatar. Russia. May also be known as Leningrad Black. Very good-quality dark red fruit. In our ongoing effort to locate the best of the hardy sweet cherries, we have been very impressed with Leningrad. Friend and fruit explorer Mark Fulford brought this one to our attention. Survived –30° with minimal winterkill in our central Maine orchards. Upright vigorous tree. **Requires a second variety for pollination.** Z4. **ME Grown.**

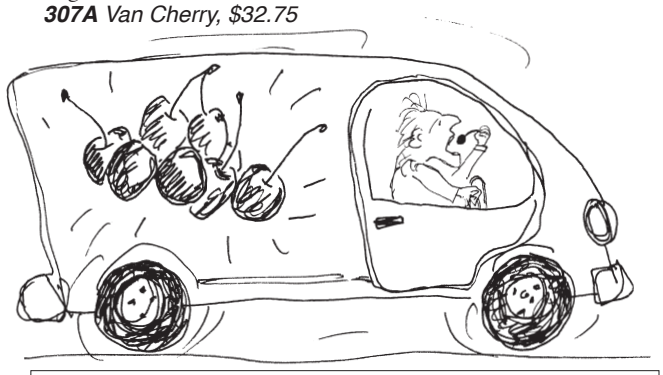
***305A** Leningrad Cherry, $32.75*

Rainier Summer. Wash. P1-680 (Bing x Van) Harold W. Fogel intro, WA Ag Exp Stn and USDA, 1960. Classic dessert cherry. Very large fruit, light yellow skin with red blush. Firm fine-textured flesh with a distinct delicious flavor. Colorless juice. Good fresh or canned. Quite resistant to cracking. Ripens midsummer. Vigorous productive tree. Early to come into bearing. **Requires a second variety for pollination.** Z4/5. **Indigenous Royalties.**

***306A** Rainier Cherry, $32.75*

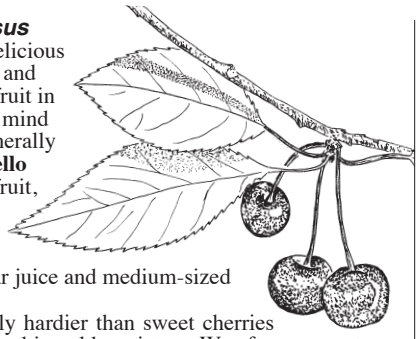
Van Summer. Empress Eugenie x open-pollinated. Summerland Res & Dev Ctr, BC, Canada, 1944. Later than other varieties. Bing-type almost-black medium-to-large fruit. Very firm though somewhat susceptible to cracking. Heavy annual crops. Strong vigorous upright tree. Excellent pollinator, but **requires a second variety for pollination.** Z5, but worth trialing in Z4.

***307A** Van Cherry, $32.75*



PPA = Plant Patent Act. Unauthorized propagation of the plant is prohibited. The use of **PPA** in the catalog is for informational purposes only and does not constitute an endorsement by Fedco of plant patenting.

Pie Cherries *P. cerasus*



Also called **Sour Cherries**. Delicious enough to eat right off the tree and especially good in pies. They fruit in early to midsummer and don't mind heavy soil. Pie cherries are generally divided into two groups: **Morello** types have dark red spherical fruit, dark juice and relatively small compact trees. **Montmorency** (or Amarelle) types have light red slightly flattened fruit, clear juice and medium-sized somewhat open trees.

Pie cherries are significantly hardier than sweet cherries but flower buds may be damaged in colder winters. We often encounter excellent crops in central Maine. **Pie cherries are self-pollinating, and do not require another variety for pollination.** Mature trees reach 10–15' tall. Plant 15–20' apart. (2½-6' grafted trees)

Evans Mid-Late Summer. Parentage unknown. Edmonton, Alberta. Also called **Bali**. Rescued from obscurity in 1976 by Dr. Ieuan Evans for whom it was named. Popularized by Bill MacKentley of St. Lawrence Nurseries. Large crops of Morello-type fruit are excellent for eating, jams, jellies, pies, dark red juice and wine. Can be very hardy and produce good-quality fruit, but our results in Zone 3 have been inconsistent. Naturally dwarf tree, tolerant of a wide range of soils, although prefers light fertile soils. Z3/4.

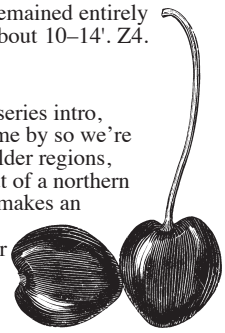
***311A** Evans Cherry, $32.75*

Garfield Plantation Summer. Garfield Plantation, ME. Heirloom pie cherry grown for generations on an Aroostook County farm. One of our most promising finds in our search for varieties that really produce well. In the spring of '09, Garfield trees in northern Maine flowered and fruited after –44°! Bright red fruit is similar to Montmorency. Hardy, productive, extremely long-lived, and proving to be very resistant to disease in our northern trials. Although the original tree is long gone, it lives on in the form of innumerable young trees that have suckered up to 100' or more behind the farm along the edge of the ubiquitous potato field. Recommended for trial in all areas of northern New England. Z3. **ME Grown.**

***312A** Garfield Plantation Cherry, $32.75*

Mesabi Summer. Bing x chance seedling. Duluth, MN, 1964. Red skin and lighter red flesh with clear juice. Bing parentage makes it sweeter than other Montmorency types. Recommended for sauce and pies. We became very curious about Mesabi when we heard reports of 20-year-old trees in Maine remaining healthy and productive. Our tree has shown no dieback and is quite productive. It has also remained entirely disease free. Naturally dwarf-sized tree will grow to about 10–14'. Z4. **Indigenous Royalties.**

***313A** Mesabi Cherry, $32.75*



Sweet Cherry Pie Summer. *P.* 'Eubank'. Bailey Nurseries intro, Newport, MN, 2014. Hardy pie cherries are hard to come by so we're always on the lookout. Showing promise for fruit in colder regions, this Montmorency type is the latest cultivar to come out of a northern nursery. Tangy rich firm flesh holds up in cooking and makes an awesome pie. Considered best for pies and preserves but not bad right off the tree, hence the name. A sweeter pie cherry for your pie cherry collection! **PPA**. Z4.

***315A** Sweet Cherry Pie Cherry, $32.75*

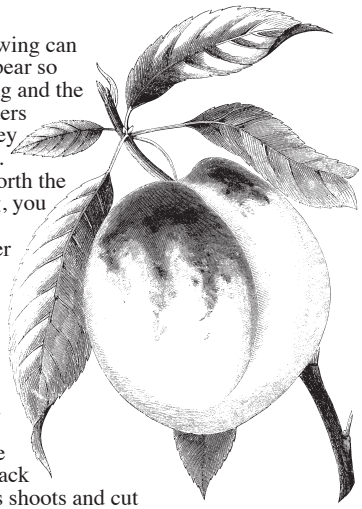
Indigenous Royalites

A few years ago, Fedco began to donate a portion of our seed sales of certain varieties—like Hopi Blue corn and Jacob's Cattle bean—to Nibezun, a Wabanaki project here in Maine that is working to rematriate Penobscot land and to create dialogue on healing throughout the extended community (nibezun.org/nibezun-project/). Our Indigenous Royalities program is one small way to appreciate and recognize the native breeders and seed keepers of the past whose varieties have endured and continue to sustain us here on Turtle Island.

Last year we extended the program to our Trees catalog by donating royalties from any plant that bears a Native American name. We recognize that Waneta plum, for example, was given a Sioux name by a white person. These plants were likely named without permission. While this practice continues in the nursery trade, it is a not something we embrace. At the same time, we can appreciate a plant as an innocent third party, inherently independent of language and names and holding merit in our landscape.

Long before breeding stations and universities, there were Tree Seed Keepers. Many of our named cultivars likely carry the genetics of the old trees tended long before European arrival. Where you see **Indigenous Royalites** at the end of our description, you will know we are dedicating 10% of sales of these plants to Nibezun. Last year's Trees royalties came to $3,223.79.

Peaches *P. persica*



Northern New England peach growing can be very successful. The trees can bear so heavily that the fruit needs thinning and the branches need support. Some winters can be hard on peach trees, and they may die. Other trees live for years. Replant and try again. They are worth the trouble, and since they bear young, you won't have to wait long!

Prune peach trees in spring after the buds begin to swell and show pink. Remove dead and inward-growing branches. Make a few bold cuts to bring main branches closer to the trunk. Peach trees grow vigorously each year and fruit on last year's wood. The goal is to keep trees small and open; leggy branches will break from the weight of the crop. After cutting back any main branches, thin last year's shoots and cut them back to about 12–18". When you're done, the tree shape should look something like an open hand reaching for a peach, with the tree not much taller than 10' or so.

Peaches are usually unaffected by pests or diseases in northern areas, the occasional exception being **peach leaf curl**. PLC is not a fatal problem but does need to be controlled if you get hit with it. Look for crinkled or puckered foliage in spring. Remove affected leaves and compost them. Spray the tree with lime, sulfur or copper early the following spring while it is still dormant (before any buds open!) Onion, garlic or horsetail spray while leafed-out may also be effective.

Peach trees are self-pollinating; they do not need a second tree for pollination. Mature trees will be 10–15' tall; plant 20' apart. (3-6' trees)

Contender Late. NCT 544 (Winblo x complex parentage of North Carolina selections) DJ Werner, JR Ballington and DF Ritchie intro, Ag Exp Stn, Raleigh, NC, 1988. Extend your peach season with this high-quality variety that is proving to be hardy in northern Maine. Large round bright red and yellow freestone fruit with a slightly raised suture. Firm melting aromatic yellow flesh. Growth habit similar to Redhaven, but fruit ripens 3 weeks later. Resistant to leaf spot. Because it blooms quite late, it might escape late spring frosts. Z4 maybe Z3.

***319A** Contender Peach, $31.25*

Cresthaven Mid-Late. MI Ag Exp Stn, South Haven, MI, 1963. Very round medium-large yellow fruit with a red blush and yellow sweet juicy flesh. Freestone. Ripens later than Redhaven. From the Haven series of peaches bred by Professor Stanley Johnston (1898-1969) who grew and studied more than 20,000 peach trees in Michigan. Z5 but worth trialing in Z4.

***320A** Cresthaven Peach, $31.25*

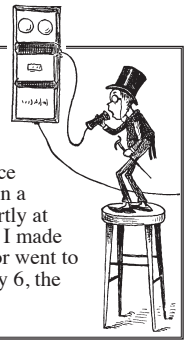
Redhaven Early-Mid. Halehaven x Kalhaven. MI Ag Exp Stn, 1940. Considered hardy, but not as hardy as Reliance. Medium-sized round fruit with beautiful red and golden-yellow skin and sweet firm fine-textured yellow flesh. Non-browning. Excellent for eating, freezing, canning, shipping. Countless Fedco customers call this their favorite peach; also the world's most widely planted freestone peach. Hardy buds; trees have produced crops in southern Aroostook County orchards. Vigorous highly productive disease-resistant spreading trees are tolerant to bacterial spot. Z4.

***323A** Redhaven Peach, $31.25*

Reliance Early-Mid. Open-pollinated seedling of Minn PHO 4559 x Meredith. NH Ag Exp Stn, 1964. Considered the hardiest peach. Medium-sized, roundish, freestone. Rather dull red blush over greenish yellow. Bright yellow flesh, soft and juicy. Flavor usually considered fair, but we love it in Maine. Often produces large crops. Bears at an early age. May have some resistance to peach leaf curl. Z4 and pockets of Z3.

***324A** Reliance Peach, $31.25*

1984: John Bunker gets a telephone.
Bunk: Financed with a start-up loan of $400, Fedco Trees' first season operated in the ground floor of the Fedco Food Warehouse in Winslow. We had 90 orders and $14,000 in sales. Most plants came from Hilltop Nurseries in ME, Nourse Farms in MA, and St. Lawrence Nurseries in NY. I drove over to NY with Jack Kertesz in a borrowed pickup truck to get the St. Lawrence trees. Partly at CR's insistence, I installed a phone at home. Until then, I made my calls from our neighbor's kitchen a half mile away or went to the phone booth next to the Palermo post office. On May 6, the first Tree Sale was complete.



Hybrid Plums *Prunus* spp.

Extremely hardy crosses between various Asian and American species; may fruit even after severe winters.

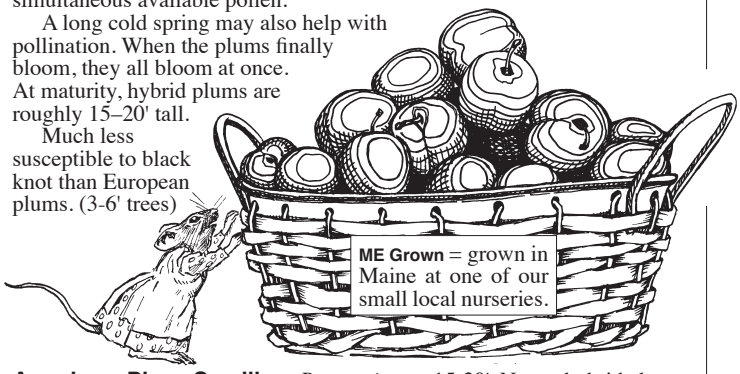
Hybrid plums require a second variety for pollination. Plant a cluster of trees close enough together for the branches to mingle. Our clusters number from 3 to nearly a dozen trees planted. They can be planted close to form a thicket, or spaced 15–20' in an orchard setting. Include native plum pollinators (*Prunus americana* seedlings or varieties) among the hybrids. With some decent sunshine during bloom, you should get good fruit set. As a pollinator, we suggest Pamela (also South Dakota or Toka, which we've offered in the past) in addition to *P. americana* or *P. nigra* seedlings or grafted trees in the orchard. We include the American plum seedling in this hybrid section because it may be the best pollinator for the hybrids.

Bloom times are similar for the varieties we offer; however, some growers have been concerned that the American plums, including South Dakota, bloom later than the hybrids. Some years, this can be an issue. Ideally you would plant at least 4 different varieties. Regardless of which ones you plant, you should get a good mix of pollen when each variety is in bloom.

Pollination may also improve with heat. Growers in warmer districts often report better success with pollination. This may be because the heat prolongs the bloom season, increasing the number of trees with simultaneous available pollen.

A long cold spring may also help with pollination. When the plums finally bloom, they all bloom at once. At maturity, hybrid plums are roughly 15–20' tall.

Much less susceptible to black knot than European plums. (3-6' trees)



ME Grown = grown in Maine at one of our small local nurseries.

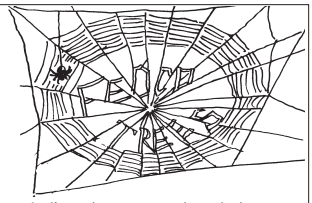
American Plum Seedling *P. americana* 15-20' Not a hybrid, but included here since it may be the best pollinator for hybrid plums. Seedling plum that grows in thickets and produces very decent red, yellow and orange 1" fruit, suitable for fresh eating, canning and freezing. Spectacular white bloom in spring is highly ornamental. Red fall color. Plant singly as a graceful specimen, or let the branches intertwine with other plums for maximum pollination, planting one American plum for every 3–4 hybrid trees. Tends to sucker freely. This tree stock is significantly larger than plum seedling rootstock (see page 39). Extremely hardy. Z3. **ME Grown.**

***328A** American Plum Seedling, $21.50*

Black Ice Midsummer. P. Lydecker [*P. besseyi* x (*P. salicina* Oka x *P. sal*. Z's Blue Giant)] U of WI, River Falls, 2006. Large 2" round early-ripening high-quality hardy blue-black dessert plum. Very sweet juicy reddish-purple semi-freestone flesh. Precocious and productive tree with a naturally compact growth habit. Bred by Brian Smith, whom we visited a few years ago on a fruit exploration trip in the Upper Midwest. He graciously showed us all through his amazing nursery in River Falls. He was growing many of his plums in huge tubs, manipulating bloom time using greenhouses and coolers. This enabled him to cross species or varieties that would never normally flower together. Though we're not fans of plant patenting, we are pleased to offer his first major introduction. The literature recommends Toka or La Crescent as a pollinator. **PPA**. Z3. **ME Grown.**

***329A** Black Ice Plum, $32.25*

Fruit-growing websites



Whether you use organic or conventional orchard practices, several websites can provide you with information about insect and disease pressure, spray timing, frost predictions and a whole lot more. Here are a few of the best:

UMaine Cooperative Extension: umaine.edu/ipm/programs/apple/
Cornell University: fruit.cornell.edu/
University of Vermont: uvm.edu/~fruit/
UMass Extension Fruit Program: ag.umass.edu/fruit
Holistic Orchard Network: groworganicapples.com/
Know Your Roots' newsletter, *Ecosystem Insights*: newsletterknowyouroots.com/newsletter--ecosystem-insights.html

Hanska Summer. *P. a*. x *P. simonii*. NE Hansen intro, Brookings, SD, 1908. Medium-sized bright red fruit with a heavy bluish bloom. Firm fragrant yellow semi-freestone flesh. When cooked, the fruit has a strong apricot-like flavor reminiscent of its Chinese "apricot plum" parentage. The fruit resembles its sister seedling, Kaga. *Hanska* is the Sioux word for 'tall' referring to the tree's fast growth in the nursery. We agree! It's grown quite rapidly in our orchard. Though Hansen gave it a lengthy write-up in his 1927 Plant Introductions Bulletin, Hanska all but disappeared and remains one of the rarest of his introductions. We're happy to offer it in our catalog. Z3/4. **ME Grown. Indigenous Royalties.**

***332A** Hanska Plum, $32.25*

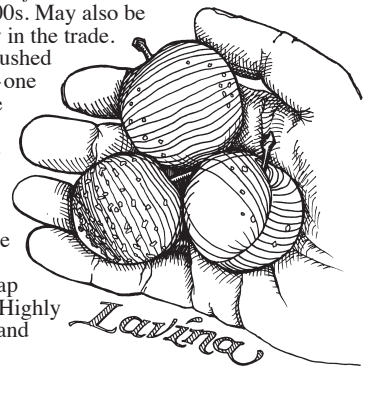
Kahinta Mid-Late Summer. Luther Burbank's *P. sal*. Apple x *P. a*. Terry. SD, 1912. Another intro by plant breeder NE Hansen. Large 1½" roundish slightly pointed fruit is flattened at the stem end. Brilliant red-purple tart skin and translucent yellow-orange tart but quite flavorful flesh. Easy to peel; peeled fruit looks like a peeled tangerine. Or you can bite a small hole in the skin and suck out the juicy flesh. Clingstone. Very good for fresh eating or canning. Medium-sized spreading tree. Kept pruned, our 20-year-old tree remains about 8' tall. Bears more reliably than most other varieties in our orchard. *Kahinta* is the Sioux word for 'sweep.' Rare. Z3. **ME Grown. Indigenous Royalties.**

***333A** Kahinta Plum, $32.25*

La Crescent Late Summer. *P. sal*. Shiro x *P. a*. Howard Yellow. U Minn, 1923. Also known as **Golden La Crescent** or **Golden Minnesota**. Most of the hybrid plum varieties are colored with some variation of red and orange with a little purple tossed in. Yellow-skinned La Crescent is one notable exception. The beautiful roundish tender thin-skinned yellow fruit is sometimes blushed with a little pink. Tender yellow juicy flesh of excellent quality is sweet, aromatic and suggestive of apricots. Freestone. Upright spreading vigorous tree. Z3/4. **ME Grown.**

***334A** La Crescent Plum, $32.25*

Lavina Mid-Late Summer. *P. cerasifera* x *P. salicina*. Developed in Lithuania, early 2000s. May also be known as Avalanche. Rare variety in the trade. Stunning golden-yellow skin is blushed dark red to pink when fully ripe—one of the most attractive plums in the orchard with fruit weighing in at just over an ounce. Amber flesh is meaty with unusual flavor notes of papaya and caramel. Ripens in mid-late September in central Maine. Seems to bloom around the same time as Toka. Grower Jesse Stevens' grafts survived a cold snap of –26° with only minor dieback. Highly vigorous growth. Semi-freestone and crack resistant. Z4. **ME Grown.**



***335A** Lavina Plum, $32.25*

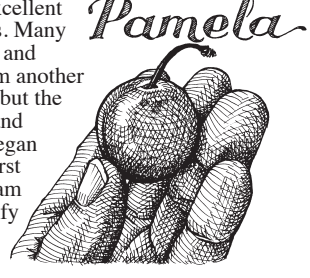
Monitor Late Summer. MN 70 (*P. sal*. Burbank x *P. a*.) U Minn, 1920. Medium-sized roundish ovate pointed fruit has thick deep purple skin and a thin bloom. Meaty tart strong-flavored orange flesh. Frank Foltz of the old Northwind Nursery in Minnesota described it to us as having a "strong, spice flavor on the tart side…too tart, perhaps, for most peoples' taste, but I like the sprightly flavor." We like it, too! Clingstone. Vigorous reliable productive upright spreading tree. Z3/4. **ME Grown.**

***336A** Monitor Plum, $32.25*

Obilinya Midsummer. Unknown parentage. Purple-red fruit with yellow-bleeding-to-red firm flesh. Grower Jesse Stevens says it has "skin less sour than many other hybrids, but still a good amount of zing." Seems plenty hardy once established with good pest and disease resistance. Blooms early and pairs well for pollination with Lavina and Purple Heart. Ripens mid-August in central Maine. Highmoor Farms, UMaine's Ag Experiment Station, gives it an overall rating of "excellent!" Z4/5. **ME Grown.**

***337A** Obilinya Plum, $32.25*

Pamela Late Summer. *P. a*. seedling, Westmanland, ME. Fedco intro, 2105. High-quality sweet-fleshed totally freestone medium-small fruit. Reddish skin with yellowish undertones. Productive and extremely hardy. Flowers with a pinkish tone. An excellent pollinator for hybrid and American plums. Many years ago, longtime Fedco growers Steve and Barb Miller purchased a hybrid plum from another nursery. The grafted plum never did well but the rootstock sprouted from below the graft and eventually fruited. It was so good, they began to graft it around the farm. When Steve first told us about the plum, he just called it Pam (from *P. americana*). We decided to dignify it a bit. Z3. **ME Grown.**



***338A** Pamela Plum, $32.25*

Pembina Early Summer. *P. sal*. Red June x *P. n*. Assiniboine. NE Hansen intro, SD Exp Stn, 1923. Large pointy bright red half-freestone fruit with bluish bloom. Dark golden-orange flesh is firm and apricot flavored. One of the first of the hybrids to ripen in summer, about the same time or a bit earlier than Underwood and well before the bulk of the plum crop. Z3/4. **Indigenous Royalties.**

***339A** Pembina Plum, $32.25*

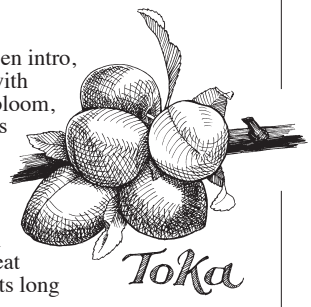
Pipestone Late Summer. MN 218 [*P. sal*. Burbank x (*P. sal*. x *P. a*. Wolf)] U Minn, 1942. Juicy yellow-fleshed clingstone plum with excellent sweet flavor. Tough yet thin skin peels easily. Large deep red fruit with a golden blush presumably named in honor of the beautiful red catlinite rock of Pipestone, MN, a sacred site to First Nations people. Vigorous reliable hardy tree. Z3. **Indigenous Royalties.**

***340A** Pipestone Plum, $32.25*

Purple Heart Late Summer. Elwyn Meader intro, Enfield, NH, 1968. Medium-sized clingstone fruit with red-purple skin and flesh. Some say the most delicious plum we offer. Meaty, mild and rich with no astringency. It's wonderful. Origins shrouded in mystery. It was brought to the great plant breeder Professor Elwyn Meader by a fellow who passed away before Meader could ascertain the plum's origin. We planted ours next to Black Ice: both are fruiting well. Underwood also may be a good pollinator. Not as hardy as other hybrids. May show tip damage following colder winters in central Maine, some susceptibility to black knot. Z4/5. **ME Grown.**

***341A** Purple Heart Plum, $32.25*

Toka Late Summer. (*P. a*. x *P. sim*.) NE Hansen intro, SD Exp Stn, 1911. Rosy red fruit is mottled with darker purplish-red and covered with a faint bloom, up to 1 1/2" in diameter. Grower Don Johnson's comment: "Talk about flavor: candy plum." Sweet, distinctive, meaty and flavorful. Not real juicy. Somewhat freestone. Extremely vigorous tree blooms heavily every year. Diligent pruning may be required to keep it from becoming a bit of a monster. Considered a great pollinator for other hybrid plums because of its long bloom period. Z3. **Indigenous Royalties.**



***342A** Toka Plum, $32.25*

Underwood Midsummer. MN 91 [(*P. sim*. x *P. sal*. Shiro) x *P. a*. Wyant] U Minn, 1921. Large 2" dull red fruit. Firm sweet juicy golden-yellow semi-freestone flesh, very good for eating and cooking. Long picking season. Blooms earlier and longer than most hybrids and appears to be a very good pollinator for other hybrid plums, including Purple Heart. Northern Maine grower Steve Miller considers it one of his most reliable bearers. Long ripening season. Vigorous large spreading tree. Z3. **ME Grown.**

***343A** Underwood Plum, $32.25*

Waneta Midsummer. (*P. sal*. Apple x *P. a*. Terry) NE Hansen intro, SD Exp Stn, 1913. Released when hybrid plums were an important and commercially viable crop. Medium to large, somewhat pointed, 1 1/2–2" reddish-maroon clingstone fruit. Sweet tender translucent orange flesh is very juicy but not dripping. Medium-thick skin, tart and easy to peel. Delicious overall taste. Hansen said of Waneta: "My belief is that in this variety I have combined the best points of the native and the Japanese plum. It is probably the largest [fruit] of over 10,000 seedlings." Early blooming healthy open spreading tree bears reliably in our orchard. Named after a Yanktonai youth who won fame in the War of 1812 and later became a great chief. Z3. **ME Grown. Indigenous Royalties.**

***344A** Waneta Plum, $32.25*

Plum Curculio... and garlic

Plum curculio is a small pesky insect, a terrible plum and apple pest. We have read that laying sheets of cardboard under plum (and apple) trees will smother the pupae developing in the soil. Many organic growers spray Surround clay powder on their trees to combat this weevil. (See our Seeds & Supplies catalog, or fedcoseeds.com/ogs, for this and other orcharding supplies.)

Many years ago we planted garlic near one of our apple trees and neglected to harvest all the bulbs. Now we have a small colony of garlic plants around the tree. Recent reports are touting garlic as a curculio deterrent. Anecdotal evidence suggests it may be working at our place. Plant more garlic!

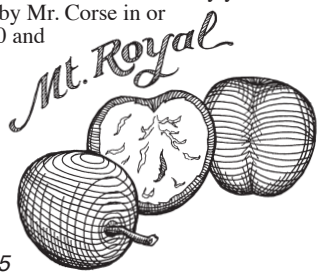
European plums *P. domestica*

Delicious fresh and often grown commercially for prunes. A true prune is a plum that can be dried without the pit fermenting. We've heard recommendations to blanch the plums for 45 seconds before drying them. European plums produce smaller fruit and are generally not as hardy as the hybrid plums, though they can handle heavier soils and are less prone to brown rot. Unlike hybrids, they are prone to the fungal disease black knot, which looks like black chewing gum and appears on branches. While not necessarily fatal, it must be kept in check by removing and destroying infected branches. Trees grow upright and are usually trained to a central leader. Although **European plums are self-pollinating**, planting two different varieties will improve pollination. (Will not pollinate hybrid plums.) Mature trees are 15–20', or smaller. Space 20' apart. (3-6' trees)

Green Gage Mid-Late Summer. Unknown origin, maybe *P. d*. x *P. institia*. Probably Armenia, long before 1500. Also called **Reine Claude**. Often considered the best of all dessert plums. Small round semi-freestone yellowish-green fruit sometimes mottled with red has tender juicy melting flesh with rich flavor. A favorite in Europe for more than 500 years. Long referred to as Armenian plum, suggesting its possible point of origin, though no one knows for sure. Found its way to Greece and Italy and then introduced into France in the early 16th c. where it acquired the name Reine Claude in honor of the wife of Francis I. Later brought to England by the Gage family. While a number of Gages have been selected over the years, Green Gage is the original. Medium-sized tree bears heavily. Not long-lived. Fruit susceptible to cracking. Z4.

***349A** Green Gage Plum, $32.25*

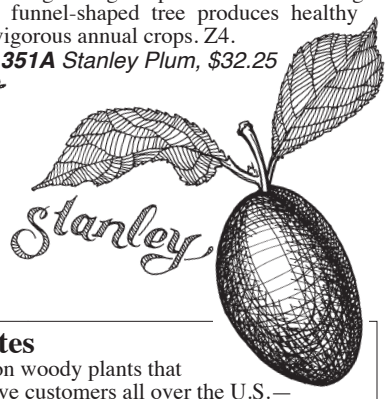
Mount Royal Late. Chance seedling, Outremont, Quebec, before 1903. Popular plum in Quebec and the northern U.S. for many years. Also called **Mont-Royal**. Discovered by Mr. Corse in or near Montreal sometime between 1830 and 1850. Bears abundant annual crops of medium-sized roundish dark purple fruit. Often considered the sweetest of the European plums. The flesh is greenish-yellow, juicy and firm. Use fresh, dried, frozen, canned and in preserves. Medium-sized tree is open with good crotch angles and requires only moderate pruning. Z3.



***350A** Mount Royal Plum, $32.25*

Stanley Late. Agen x Grand Duke. NY Stn, 1926. Most popular European prune plum in America with the possible exception of 'Italian'. Excellent for cooking, eating, canning and drying. Medium-to-large oval fruits with dark blue skin. Green-yellow firm but tender juicy fine-grained sweet flesh. Reliably bearing fast-growing adaptable medium-to-large funnel-shaped tree produces healthy vigorous annual crops. Z4.

***351A** Stanley Plum, $32.25*



Relative ripening dates

Although our catalog focuses on woody plants that do well in the northeast, we have customers all over the U.S.—up along the Canadian border, in the mid-Atlantic states, down in the mountains of North Carolina and out west in the high desert—anywhere hardiness is important. We love having customers so spread out, but it's not easy to tell when a variety will ripen in every far-flung orchard. A fruit that ripens in September in northern Maine might ripen a month earlier in Pennsylvania. Ripening dates also vary from year to year depending on conditions. Not only that, the fruit might be exquisite up north but rather blah farther south. That's the nature of these varieties, and it's part of why we offer a wide selection. We think you'll find varieties that can thrive in your area.

1985: "A good day."

Bunk: We increased the number of items to 79, including 24 apples, and had 112 orders.

from Bunk's journal, April 19, 1985: We passed out a lot of orders at the tree sale and sold several hundred dollars of surplus trees. All will be needed to help pay our bills. A good day.

Small Fruits & Berries

Highbush Blueberries *Vaccinium corymbosum*

Many of Maine's lakes are lined with massive stands of highbush blueberries, native to North America. Grazing the shore requires only time and a suitable vessel; we prefer kayak or canoe. The beautiful vigorous shrubs are extremely easy to grow at home, productive and reliable. By planting several varieties, you can harvest berries from early July through most of August. Bears first crop 3–5 years after planting. Productive for at least 20 or 30 years. Berries may turn blue before they reach their peak flavor. Leave them on the bush until they are fully ripe. Check a few before you pick them all! **Two varieties are required, three or more recommended, for pollination.** (1-2' transplants)

Bluegold Mid-Late. 4-5'. Blue Haven x (Ashworth x Bluecrop) USDA, 1989. Highly productive. Flavorful firm medium-large light blue fruit ripens over a short period of time. Attractive dark green leaves turn shades of red and purple in the fall. Tolerant of fluctuating temperatures and extremely cold conditions with no bud damage. Densely branched with spreading habit; we recommend pruning to encourage upright growth and optimal fruiting. Z3.

***355A** Bluegold Blueberry, $15.00*

Blueray Early-Mid. 4-6'. (GM 37 x CU-5) USDA, NJ, 1955. Large firm dark blue berries of high dessert quality in small clusters. Considered the best-tasting by nearly everyone who grows highbush blueberries. Very vigorous bush with upright spreading habit. Consistently productive. Z4.

***356A** Blueray Blueberry, $15.00*

Elizabeth Mid-Late. 5-6'. Discovered by Elizabeth White, Whitesbog, NJ, and released in 1966. Friend and avid fruit grower Dan Kennedy of Searsmont, ME, grows 17 different varieties of highbush and rates Elizabeth and Blueray as his top favorites. He describes the bushes as bearing dense clusters of large fruit with a balanced flavor of sweet and tart. Stores well in refrigeration. Large vigorous upright shrub has strong spreading lateral branches. Z4.

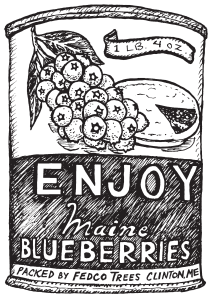
***357A** Elizabeth Blueberry, $15.00*

Elliott Very Late. 4-6'. Burlington x [Dixi x (Jersey x Pioneer)] USDA, 1974. A real season-extender. Considered the latest of all varieties, Elliott ripens two weeks after Jersey. Loose clusters of medium-sized very firm mild-flavored light blue berries. Slightly spreading somewhat bushy upright plant is highly productive every year, in part because it blooms late and escapes spring frosts. Z4.

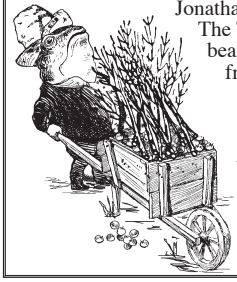
***358A** Elliott Blueberry, $15.00*

Hannah's Choice Early. 5'. G-136 x G-358. USDA, 1982. Selected from field-grown seedlings with Earliblue and Bluecrop in the lineage. Medium-large light blue firm berries are sweet with a mild subacid flavor. Stores longer than some cultivars. Popular with market growers. Upright form. Ripens a few days before Duke and shows some decent resilience after a late frost. Z4/5.

***359A** Hannah's Choice Blueberry, $15.00*



1986: The Black Oxford apple makes its Fedco debut.



Bunk: Fedco Trees moved to our 30x30' barn on our farm in Palermo for one year. This is the first year we offered Black Oxford trees. It was probably the first time Black Oxford had ever been sold in a nursery catalog. Mark and Jonathan Fulford of Monroe became our first local growers. The Tree Sale pick-up was held on April 25 and 26 at the beautiful old former Grain Mill in the parking lot across from Dinsmore's Store in Branch Mills, Palermo. The Grain Mill, sadly, was dismantled in about 2010.

from Bunk's journal, April 25, 1986: Rain off and on…The sale went very well. Perfect weather for the trees. No roots drying out as far as I know. There was a mad rush at Dinsmore's for the trees. We sold a lot of surplus. The most popular being Plums of all things and of course raspberries and also grapes. Good Day. Long day.

Jersey Mid-Late. 5-7'. Rubel x Grover. USDA, 1928. The beloved old standard of blueberry introductions to which new varieties are compared. Medium to large dark blue berries in large loose clusters. Vigorous erect hardy bush. Productive, adapted to a wide range of soils, highly praised, easy to grow and suited to the New England climate. Z4.

***360A** Jersey Blueberry, $15.00*

Meader Early-Mid. 5-7'. Elwyn Meader intro, UNH Ag Exp Stn, Durham, NH, 1971. Medium-large medium-blue fruit with excellent flavor. Sweet with a hint of acid. Vigorous upright open lightly spreading form. Very hardy. Z4 or even Z3.

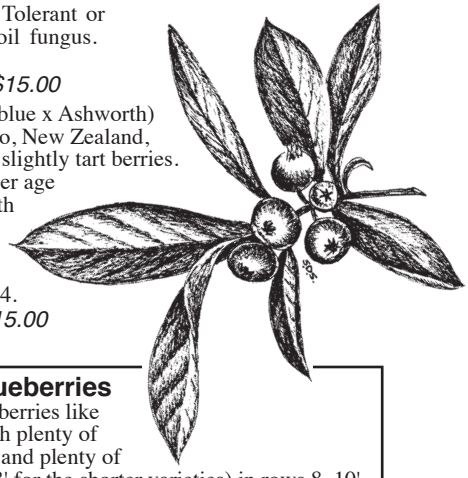
***361A** Meader Blueberry, $15.00*

Nelson Late. 5-6' Bluecrop x G-107 (F-72 x Berkeley) USDA, NJ, 1989. Firm large dark blue berries in loose clusters taste great, similar to Bluecrop. Particularly vibrant red fall foliage. Upright vigorous high-yielding bush. Z4.

***362A** Nelson Blueberry, $15.00*

Patriot Early-Mid. 4'. US3 (Dixi x Michigan LB-1) x Earliblue (Stanley x Weymouth) UMaine, 1976. Partial lowbush parentage. Adaptable to many soil types. Large firm berries with excellent flavor. Productive upright open spreading bush. Tolerant or resistant to some strains of soil fungus. Hardy. Z3.

***363A** Patriot Blueberry, $15.00*



Reka Early. 4-6'. E118 [(Earliblue x Ashworth) x Bluecrop] Ruakura RRC intro, New Zealand, 1985. Flavorful medium-sized slightly tart berries. Higher productivity at a younger age than most other blueberries with consistently high yields for years to come. Fast growing and adaptable, sand to heavy clay. Upright vigorous habit. Z4.

***364A** Reka Blueberry, $15.00*

Growing Highbush Blueberries

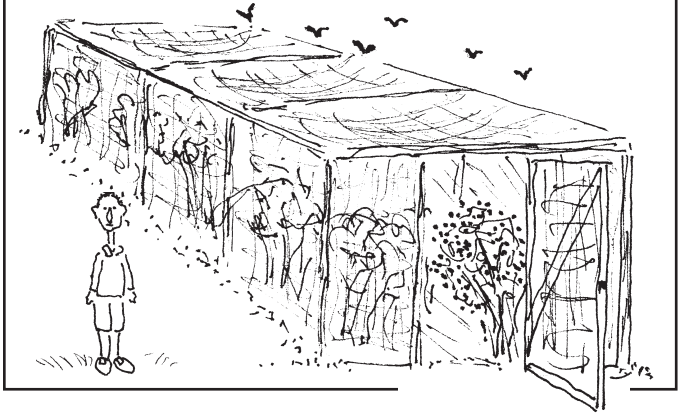
Shallow-rooted, highbush blueberries like light acid soil (pH 4.0–5.2) with plenty of organic matter, good drainage, and plenty of water. Space them 3–6' apart (3' for the shorter varieties) in rows 8–10' apart. If your soil lacks acidity, add peat, leaf mold, or 1 cup elemental sulfur per bush.

Dig a hole at least twice the size of the root ball. If you use peat, soak it and then mix it with soil at a one-to-one ratio. Plant at the same depth as in the nursery. Do not let the roots dry out! Pack the soil firmly and water thoroughly. Plants require at least 1" water per week during the growing season. On most soils, blueberries require regular applications of nitrogen. In the spring, apply a high-nitrogen fertilizer, such as 1/2–1 qt composted hen manure per plant.

Fruit is produced on vigorous one-year shoots off healthy canes. As canes age they become twiggy and less productive. Begin pruning after three years. Head back long pieces of new growth for a bushier plant. Cut out weak or dead canes and dead tips. Each bush should be allowed to grow 6–10 canes varying in age from 1–6 years old. Thereafter, remove dead canes and those over 6 years old to encourage new replacement canes. Bushes with regular moderate pruning produce the most berries.

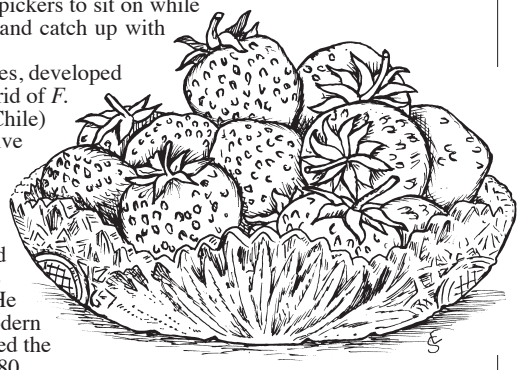
Berries may need net protection from birds. One of the best arrangements we've seen is John Meader's netted "house" in Buckfield. He has about 40 bushes growing under a framework made of posts and 2x4s and completely covered in netting.

Competition with grass may weaken and kill your blueberries. Mulch heavily (3–6" or more) every year with pine needles, cardboard, wood chips, hay, sawdust, even old slab wood. When using sawdust you may want to compensate by adding extra nitrogen.



Strawberries *Fragaria* x *ananassa*

A major highlight of every summer is picking strawberries. In central Maine strawberry season usually coincides with the summer solstice. Although no one knows where the common name *strawberry* originated, idle speculation is that it comes from the practice of putting straw down between the rows for pickers to sit on while they sample the fruit and catch up with each other.



Modern strawberries, developed about 1830, are a hybrid of *F. chiloensis* (native of Chile) and *F. virginiana* (native of North America). Royce Bringhurst of the UC-Davis developed everbearing strawberries from wild plants found in Utah's Wasatch Mountains. He crossed these with modern varieties and introduced the first everbearers in 1980.

50 plants will plant from 50–100'. (virus-free bare-root stock)

EVERBEARING STRAWBERRIES

Everbearing, or day-neutral, strawberries flower regardless of day length as long as temperatures are between 35 and 85°, and produce fruit from June to October. They are uncommonly productive—about 1 lb of fruit per plant the first year, and slightly less the second year. Productivity peaks in August the first year. The second year, berry size decreases in the hottest weather and increases in cooler weather. After second year, turn under and start again.

Albion CN220 (Diamante x Cal 94.16-1) UC-Davis, 2006. Everbearing strawberry with very large conical firm fruit, excellent flavor and good shelf life. High yielding. Fedco's Alice Coyle switched to Albion from Seascape and never looked back. She says, "The best Seascape will have better flavor than the best Albion, but Albion is definitely no slouch for flavor. It continues to bear reliably and produce large delicious berries in hot weather, when Seascape will stop producing, button up, or become bitter." Plants are large and need extra space to produce bigger berries. Resistant to verticillium wilt, phytophthora crown rot, and anthracnose crown rot. **PPA.** Z4.

***L367A** Albion Strawberry, bundle of 50, $22.25*

Evie 2 Everglade x J92D12. An "improved" everbearing variety from Edward Vinson Ltd, Kent, England, 2006. One of the most productive of the day-neutral strawberries. With ideal conditions each plant can produce more than a quart throughout the growing season. Glossy red berries are easy to grow, full of flavor, and maintain good size. Less sensitive to warmer temperatures that often bring day-neutrals to a halt. Z4.

***L368A** Evie 2 Strawberry, bundle of 50, $22.25*

Seascape CN 49. Developed by Royce Bringhurst, UC-Davis, 1991. Everbearing strawberry with bright red medium-to-long conic high-yielding firm productive reliable fruit. Excellent flavor. Broad resistance to fungal diseases. Somewhat susceptible to common leaf spot and two-spotted spider mite. Very hardy. Z4.

***L369A** Seascape Strawberry, bundle of 50, $22.25*

JUNE-BEARING STRAWBERRIES

When cultivated as described in sidebar below, June-bearing plants begin bearing their second year and can produce for up to 5 years.

AC Valley Sunset Late. K94-15 x K95-24. Bred and selected by Andrew Jamieson, Kentville, Nova Scotia, 1999. If you ever find yourself in South China, ME, in late June, stop by the humble farmstand at Full Fork Farm for AC Valley Sunsets at their peak, so sweet and juicy you're sure to ruin your shirt! These bright red firm shiny berries are so big you could make a hand pie with just one. Resistant to leaf diseases. Z4.

***L370A** AC Valley Sunset Strawberry, bundle of 50, $22.25*

Annapolis Early. K74-5 [(Micmac x Raritan) x Earliglow] Kentville, Nova Scotia, 1984. Get a jump on strawberry season with Annapolis. Fruitful even under chilly conditions, turns red consistently and reliably each year before other berries. Large plump light red fruits maintain size through several pickings. Firm tender delicious flesh. A favorite among those who grow it. Vigorous and winter hardy. Recommended for northern growers. Z3.

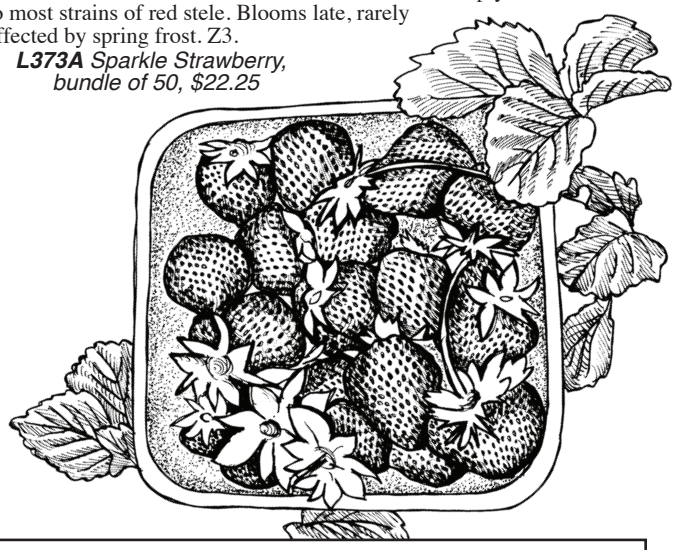
***L371A** Annapolis Strawberry, bundle of 50, $22.25*

Malwina Late. Unnamed seedling x Sophie. Bred by Peter Stoppel, Germany. Extend your picking season into late June or early July with these sweet dark glossy beauties. One of the darkest strawberries we've ever seen and possibly the tastiest. Best for fresh eating, Malwina doesn't like to hang around on the plants or the shelf. Pick every two days for firm fruits and eat 'em up with biscuits and cream. Produces fewer runners than standard varieties, so plant beds accordingly. Resistant to verticillium wilt and red stele. **PPA**. Z4.

***L372A** Malwina Strawberry, bundle of 50, $22.25*

Sparkle Mid-Late. Fairfax x Aberdeen. NJ Ag Exp Stn, 1942. We've yet to taste a strawberry that comes even remotely close to Sparkle. They possess a flavor that can only be described as the essence of strawberry. The best in an early year, the best in a late year, the best this year, last year, every year. Soft small-to-medium berries make delicious fresh eating and are also excellent for jams and freezing. One of its few drawbacks is that it tends to lose color in the freezer. Moderate crop yields. Resistant to most strains of red stele. Blooms late, rarely affected by spring frost. Z3.

***L373A** Sparkle Strawberry, bundle of 50, $22.25*



Growing Strawberries

Keep plants cold or refrigerate between arrival and planting. We ship with roots slightly on the dry side. If you cannot plant them for a while, uncover the roots, mist them with water and re-cover, leaving tops exposed. Place bundle in a paper bag and store on the bottom shelf of your fridge. Don't be alarmed if the tops become brown or mushy: they will generate new leaves.

Strawberries require good air drainage, well-drained fertile soil with pH of 5.8–6.2, thick mulch and full sun. Avoid soils where tomatoes, peppers or potatoes have grown in the past 4 years. Plant strawberries at the same depth as they were in the nursery, with the middle of the crown at soil level. Keep your patch free of weeds. They require 3/4–1" water per week during the growing season. Mulch with hay or straw in late fall to protect plants over winter. In the spring, pull mulch off plants and place between rows where it will keep fruit dry and clean during the summer. It can also be raked back over the plants if frost threatens flower buds. Floating rowcover may also be used for winter and frost protection.

The 1895 Green's Nursery catalog recommends setting out strawberry plants in the evening. "Carrying plants about the fields in the glaring sun in the heat of the day, is a trying ordeal. If planted in the evening, the dews immediately fall upon plants and give opportunity for recuperation before the next morning's sun appears." We think this is good advice for all plants.

Everbearing or Day-Neutral Strawberries

These heavy feeders benefit from 3–4" of manure worked 4–6" into the soil prior to planting. Plant 6–12" apart. Mulch with black plastic or thick straw immediately after planting. Remove flowers for the first 6 weeks, and remove all runners the first season. Mulch in late fall. Sidedress with composted manure monthly during the second season beginning in May. After second year, turn under and start again.

June-Bearing Strawberries

Matted Row system: Set plants 12–24" apart in rows 3' apart. Allow plants to produce runners freely and fill in the row. Remove all flowers the first year. Harvest berries the second summer. Immediately after harvest, fertilize liberally with compost or aged manure and renovate the row. By hand or with a tiller, narrow the row to 12" wide. Thin plants to 4–5" apart within the row. By this method a bed can last about 5 years.

Raspberries *Rubus* spp.

We love raspberries: fresh or frozen, in smoothies, jam and especially pie. We even like the foliage—best taken from the first-year primocanes—which makes a delicious and healthful tea. A leaf and fruit vinegar is very high in minerals, and the leaf tea makes a great astringent and tasty tonic. The root bark is also medicinal. Raspberry season in Maine is mid-July through fall. Native to North America, Europe and Asia, they are usually identified as *R. idaeus* or *R. i.* var. *strigosus*. 53 different *Rubus* species and subspecies live in Maine.

A second variety is not needed for pollination.

Please note: Raspberries have very fine, fibrous roots. Often they do not sprout from the plant stem after planting. This is okay. Be patient! Keep them well watered and they should all break dormancy, sprout from the roots and thrive for many years to come. All of our raspberry canes are well rooted, bare root and certified virus-free.

EVERBEARING RASPBERRIES

Everbearing raspberries bear on first-year canes (primocanes). Particularly desirable for northern growers because they can die (or be cut) to the ground and still produce a sizable crop the following year. In central Maine the first of these ripens in mid-late August and the latest could go through September.

Anne Late. JEF-b1 (Amity x Glen Garry) U of MD, 1998. Everbearing sweet flavorful pale yellow raspberry ripens in fall. Large cohesive conic fruit stores decently, is firmer than other yellows. Semi-vertical canes may sucker less than most everbearing types. Cut it entirely to the ground after the season is over. Resistant to phytophthora root rot. Z4.

***376A** Anne Raspberry, bundle of 10, $30.50*

August Red Late. NH R7 [Durham x NH 102 (dwarf F2 seedling x Taylor)] x NY 287 [NY 18810 (Marcy x Indian Summer) x NY 20990 (*R. strigosus* selection)] Developed by EM Meader, UNH, 1973. Considered the hardiest of the everbearing types—the last hope when no other raspberry will survive. Medium-large crimson fruit has excellent flavor. Compact 3' bush bears earlier than other everbearers, even Polana. Productive midsummer, about Aug. 10 in central Maine. We are very pleased to offer this rare variety, bred by Elwyn Meader. Z3. **ME Grown.**

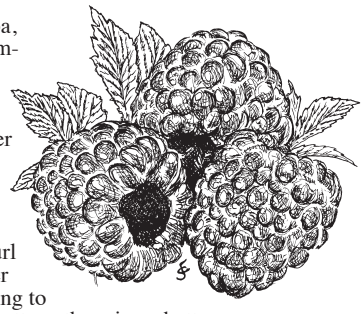
***377A** August Red Raspberry, bundle of 5, $30.50*

Polana Late. Heritage x Zeva Herbsternte. Res Inst of Pomology and Floriculture, Brzezna, Poland, 1991. Large firm red berries with very good flavor on vigorous and productive short canes. Very early for an everbearing variety. In northern districts, it ripens in late August or September and has performed well in our Fedco trials. According to David Handley of UMaine, "as near a thing to a sure bet." Easy to pick: the berries hang off the tops of the plants. Suckers freely. Z4.

***378A** Polana Raspberry, bundle of 10, $30.50*

SUMMER-BEARING RASPBERRIES

Summer-bearing raspberries bear on second-year canes (floricanes). Midseason berries ripen around late July in central Maine.



Boyne Early-Mid. Chief x Indian Summer. Morden Res Stn, Manitoba, Canada, 1960. Round-conic medium-sized berries with an intense deep dark almost purple color. Strong aromatic tart raspberry flavor and a perfect medium-soft texture. Grower John Meader speaks glowingly of Boyne, calling it "an excellent, excellent variety. Boyne is the one to beat if you're going to introduce a new raspberry." Leaves tend to curl down over the fruit making it harder to pick if you're in a hurry. According to friends who make honey and fruit butters, there is no better raspberry for processing. Disease resistant. Extremely hardy. Z3.

***379A** Boyne Raspberry, bundle of 10, $30.50*

Killarney Early. Chief x Indian Summer. Morden Stn, Manitoba, Canada, 1961. Produces medium-to-large round crumbly fruit of excellent quality over a long season. Deep red summer-bearing cultivar ripens after Prelude and before Nova. Same parentage as Boyne but firmer texture and brighter color. Sturdy 4' canes. Hardy, and yields consistently. Z4.

***380A** Killarney Raspberry, bundle of 10, $30.50*

Latham Mid. MN4 (King x Loudon) U Minn, 1920. A standard raspberry for almost a century, extremely popular and widely grown. Large bright red 1" fruit is roundish, firm, a little crumbly and sprightly sweet, full-flavored and aromatic. Great for fresh eating, canning, freezing, jam, juice or pie. Ripens over an extended season making it an ideal candidate for the home garden. Canes are 4–5' tall and highly productive. Not as spiny as most raspberries. Widely adaptable and very winter hardy. Disease resistant. Z3.

***381A** Latham Raspberry, bundle of 10, $30.50*

Royalty Purple Mid. (Cumberland x Newburgh) x (Newburgh x Indian Summer) NY Stn, 1982. Their distinctive flavor is different from the red raspberries, with a hint of black raspberry. A favorite for fresh eating among those who know it. Cohesive fairly firm large berries make outstanding jam and jelly, too. Extremely robust minimally suckering plants are very productive and open-formed; the berries are eye-level and easy to pick. Ready to harvest when they are deep purple, somewhat later than the reds. Plant in hills (see below). Disease resistant. Usually considered Zone 4 but is proving itself into Zone 3 with occasional slight tip dieback. Z3/4.

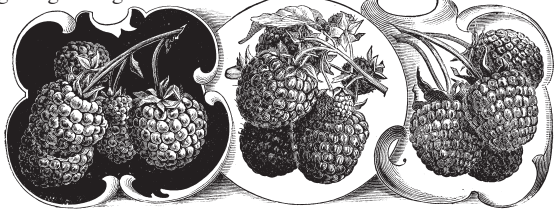
***382A** Royalty Purple Raspberry, bundle of 5, $30.50*

Agri-gel Highly recommended for raspberry planting. See p. 33.
***L627A** Agri-gel, $4.00*

Growing Raspberries and Blackberries

Cane fruits have shallow perennial roots. They prefer full sun, good air circulation and well-drained soil rich in organic matter. Avoid soils where tomatoes, peppers, potatoes, strawberries or wild brambles have grown. A well-kept patch can last 10–20 years.

Prepare planting holes by adding composted manure (15 bushels dry or 10 bushels fresh per 100 sq ft) and make each large enough to spread out the roots. Do not allow the fine roots to dry out. We suggest soaking roots in Agri-gel (**L664A**, page 33) for 1–2 hours before planting. Plant 1–2" deeper than the nursery line. Mulch with a thick layer of woodchips. Fertilize liberally each spring with up to 100 lbs manure or compost, 8 lbs bloodmeal or 14 lbs soybean meal per 100-ft row. Some sources recommend additional nitrogen feeding each June and August. Plants require 2" water per week during the growing season.



• **Everbearing raspberries:** Plant 9–15" apart. Because everbearing types bear fruit on first-year and second-year canes, you have a couple of options. In warmer districts, you can leave the first-year canes to overwinter after they fruit. The following year, you will get a light crop in early summer from those now two-year-old canes, followed by a larger crop later from the new first-year canes. In colder areas generally you would cut all canes to the ground in late fall after the leaves drop, or in early spring; new first-year canes will fruit in mid-late summer.

• **Summer-bearing raspberries:** To make a hedgerow, trellis between two wires about 3–4' off the ground and 18–36" apart. Space plants 2' apart. After harvest, prune to the ground the canes that carried fruit (or remove them the following spring). Thin the fresh first-year canes to about 3–4" apart. They will bear fruit next year. During the growing season cut back canes to 5' if they are bending over severely.

• **Purple and black raspberries and blackberries:** Plant in hills 3–4' apart, 3–4 plants per hill. Tie to a center post for support, if needed. Basic pruning is the same as summer-bearing raspberries. As they fill in, thin to 5–8 canes per hill. During the early summer, pinch back tip of first year canes to 2½–3' tall. This will encourage lateral fruiting branches. You may run a wire between hills for lateral branching but this is not necessary. In the following spring, cut these fruiting laterals back to 8–12 buds.

Black Raspberry Black raspberries bear on second-year canes. Some folks call these **black caps**.

Bristol Midsummer. Watson Prolific x Honeysweet. NY Stn intro, Geneva, NY, 1934. Medium-large firm glossy black fruit with excellent sweet blackberry-like flavor very distinct from reds. Hardy, vigorous and high-yielding. They ripen earlier in central Maine than most raspberries. USDA has found black raspberries to have some of the highest levels of antioxidants of any cultivated fruit. Unlike red raspberries, which sucker and spread, black caps stay put unless you let the long canes arch way out and root themselves in the ground. Tolerant of powdery mildew. Z4.

***383A** Bristol Black Raspberry, bundle of 5, $30.50*

Blackberry Blackberries bear on second-year canes.

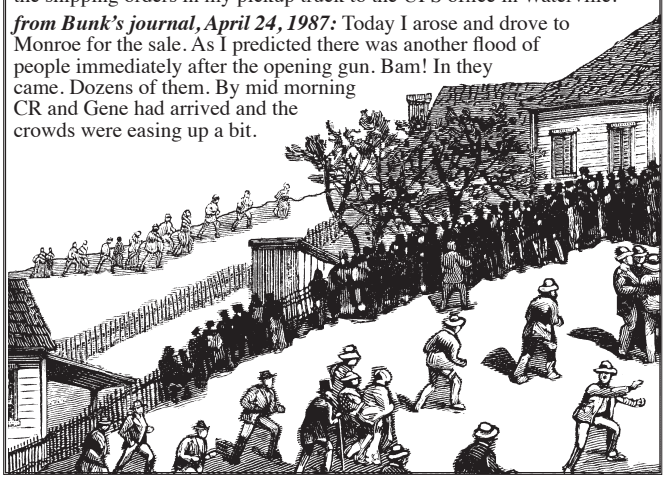
Nelson Midsummer. Nelson has been surviving Maine winters for at least a century. Introduced to us by the descendants of Nelson Fronk, whose 1928 family photograph taken on their farm northeast of Farmington shows the blackberries growing by the barn. John Meader calls it "exceptionally hardy," one of the most enduring blackberries he knows. Tall sturdy upright inch-thick canes can be grown on posts or free standing. Fruit is moderately large and quite juicy with true blackberry taste. Highly productive with 16–18 blossoms on the central stalk—the most John has seen on any blackberry. He gets four good pickings over two weeks in mid-August. Excellent jelly and good fresh eating. Disease resistant and certified virus-free plugs. Like all blackberries, spreads quickly so give it room. Z4, maybe Zone 3. (well-rooted virus-free plugs)

***385A** Nelson Blackberry, bundle of 5, $30.50*

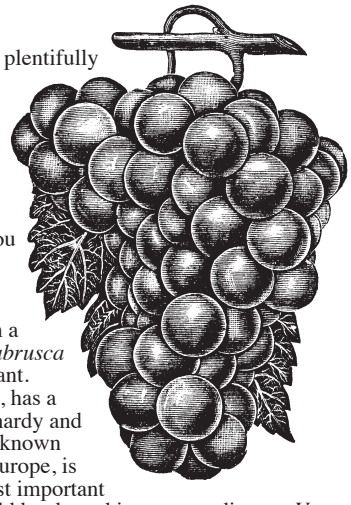
1987: Fedco Trees moves to another barn.

Bunk: We moved our operations to Mark and Paula Fulford's barn at Teltane Farm in Monroe. The barn in Palermo was way too small. UPS came to collect the shipping orders for the first time. In '85 and '86, I drove the shipping orders in my pickup truck to the UPS office in Waterville.

from Bunk's journal, April 24, 1987: Today I arose and drove to Monroe for the sale. As I predicted there was another flood of people immediately after the opening gun. Bam! In they came. Dozens of them. By mid morning CR and Gene had arrived and the crowds were easing up a bit.



Grapes *Vitis* spp.



Grapes are easy to grow and can bear plentifully even in northern New England. They begin fruiting in the second or third year after planting. They are rugged and cold hardy. Our vines bear consistently every year. Although many people prefer seedless types for table use, seeded varieties can be quite enjoyable right off the vine if you don't mind "grape nuts." Grape seeds contain an antioxidant that is twice as powerful as vitamin C.

Most grape varieties are bred from a combination of different species, *V. labrusca* and *V. vinifera* being the most important. *Labrusca* is native to the eastern U.S., has a wild tart musky (foxy) flavor, and is hardy and disease resistant. Concord is the best-known of the *labruscas*. *Vinifera*, native to Europe, is extremely high quality, and is the most important wine grape in the world, but is not cold hardy and is prone to disease. *V. riparia*, native to North America, used as rootstock for grafted varieties and in hybridization with *vinifera*, is very adaptable to a wide range of soils, disease resistant and very cold hardy.

In central Maine, "very early" grapes begin ripening in mid-August, while "midseason" ripen mid-September. Late-season Concord, a standard elsewhere, does not ripen in many northern areas. **Grapes do not require a second cultivar for pollination.** (well-rooted vines)

Bluebell Mid. MN 158 (Beta x unknown) Developed by JM Dorsey, U Minn, 1944. Our most popular seeded grape; it does everything well. Delicious sweet flavor makes them excellent for fresh eating, jelly and juice. Clusters of medium-sized dark berries with a heavy blue bloom. Extremely hardy, to –30°, *labrusca*-type ripens 2–3 weeks earlier than Concord. While it ripens beautifully from central Maine south, it may not have time to ripen in some northernmost locales. Strong, productive, vigorous—but not rampant—vine. A joy to grow. Immune to most or all fungal diseases. Z3.

***387A** Bluebell Grape, $15.50*

Frontenac Mid-Late. MN 1047 (*V. r.* RIP 89 x Landot 4511) U Minn, 1996. A highly praised cold-hardy red-wine grape, also excellent for fresh eating. Recommended for dry full-bodied Merlot- or Bordeaux-style table wines, rosés and ports. Very large loose clusters of small berries. Intense juice color, low tannins, high sugar and high acid content. In a newsletter from the Minnesota Grape Growers Association, John Marshall said, "Though the sugar may rise to impressive levels early in September, the grapes are not nearly ripe. Ignore the sugar levels and wait until September 20. The acid will drop and the wonderful black-cherry flavors that will make this grape famous will multiply." Vigorous productive disease-resistant vines. Z4/5.

***388A** Frontenac Grape, $15.50*

Growing Grapes

For the best grapes, provide moderate fertility, very well-drained soil and full sun. Grapes prefer soils with pH of 5.8–7.0. Every June we thoroughly weed the grapes under our arbor, then mulch very liberally with old hay. After that, we don't do a thing to them except harvest in late summer and prune in late spring. Space 8–12' apart in rows 8–12' apart.

Spread the roots out, planting the crown even with the soil surface. Do not prune roots. Pack soil well. Water and mulch well. After frost danger has passed, prune vines back to 3–5 strong buds. Continue to mulch annually with hay or straw. Every few years fertilize liberally with granite dust.

Grapes require annual pruning and a trellis or arbor, though in Italy they still sometimes grow them in maple trees. All systems for growing grapes involve removal of most growth in late spring to encourage new canes, as fruit is produced on these canes. There are many systems for training grapes. Some are suited to laying down and covering tender varieties over winter. Any good book on grape growing will show you several options. We suggest the Hudson River Umbrella or the Four-arm Kniffin system. The University of Maine offers a series of videos demonstrating different grape-training techniques. Go to: umaine.edu/highmoor/ and click on "videos."

People sometimes ask about wire. The current vineyard standard is high-tensile-strength class III galvanized steel wire. The gauge should be 11 to 12.5. The wire is generally sold by weight. 100 lbs of 11 gauge measures about 2600'. 100 lbs of 12.5 measures about 3800'.

Grapes rated for Zone 5 can be grown in Zones 3 and 4. To prevent winter injury, remove the vine from the trellis in fall, lay it on the ground, and bury with just enough soil to cover. To do this, plant your new grapevine at a 45° angle. Train new shoots horizontally for at least one foot. Then, curve shoots upward to form a J shape. This creates a flexible hinge, allowing you to lay the vine down at the end of the season.

For trellising ideas, see next page.

Petite Pearl Late. TP 2-1-24 (MN 1094 x ES 4-7-26) Tom Plocher intro, 2010. Small dark blue thick-skinned berries in small compact clusters make a nice *vinifera*-type dry red wine or rosé. Grower Andy Farmer calls it "very complex with lots of spice, attractive earthy aromas and jammy fruit. Substantial tannins for a fully hardy grape and a long finish. This may be an excellent blending component to add complexity and softness to most northern red wines." Good to blend with Marquette to create a Cabernet/Syrah/Merlot-style wine. Highly resistant to disease and withstood no damage at –32˚ one cold Minnesota winter. Slow grower with open habit. Thanks, Tom, for permitting Fedco to be one of the few nurseries offering this grape in the U.S. Z4.

***389A** Petite Pearl Grape, $15.50*

Reliance Seedless Very Early. Arkansas 1163 (Ontario x Suffolk Red) AR Stn, 1982. Medium-sized berries are good for fresh eating or juice. Large loose clusters of tender melting sweet pinkish-red fruit with a strawberry-like flavor. Stores well in a root cellar for 1–2 months. Seems hardy although it has shown significant dieback in our Zone 4 trials. You may need to lay vines down for the winter in colder areas (see sidebar on previous page). While the literature cautions about Reliance's disease susceptibility, our vines have performed well and remained free of disease. Z4/5.

***390A** Reliance Seedless Grape, $15.50*

Somerset Seedless Early. ES 12-7-98 (ES 5-3-64 x Petite Jewel) Elmer Swenson intro. Somerset is likely one of the hardiest seedless dessert grapes available today. One of the last Swenson introductions before the renowned and beloved grape breeder passed away in December 2004. Medium-sized loose clusters with small sweet ruddy reddish-golden fruit. Crispy texture and great flavor. Easy to grow but not overly vigorous. Z4.

***391A** Somerset Seedless Grape, $15.50*

Swenson White Mid-Late. Edelweiss x ES 442. Swenson, 1994. Large yellow-green berries in large clusters are great fresh eating and excellent as a floral white wine with Brix just over 20. Also good for ice wine production or in blends. Thick-skinned berries can hang on the vine for a while without much insect damage. Edelweiss, one of its parents, is popular for its flavor and hardiness—Swenson White didn't fall far from the vine! Very vigorous and showing hardiness to about –30˚ with good disease resistance. Z3/4.

***392A** Swenson White Grape, $15.50*

Vanessa Seedless Mid. Seneca x NY 45910. Introduced by KH Fisher and OA Bradt, Vineland Stn, Ontario, 1983. Large bright firm seedless deep red grapes with a fruity flavor make the absolute best raisins we've ever eaten. Excellent fresh eating. Medium-sized well-filled clusters on vigorous vines. Ours had some dieback at –20˚ but they all re-sprouted from the base and grew back to where they left off the previous summer. Going strong in our central Maine vineyards. Z4/5.

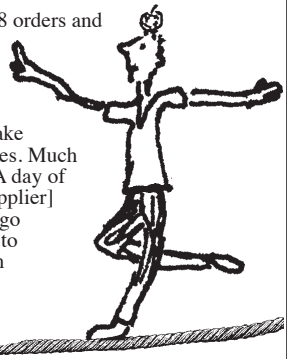
***393A** Vanessa Seedless Grape, $15.50*

Grape Collection Our pick of 4 varieties, individually labeled, a combo of hardy dessert and wine grapes.

***396A** Grape Collection, bundle of 4, $56.50*

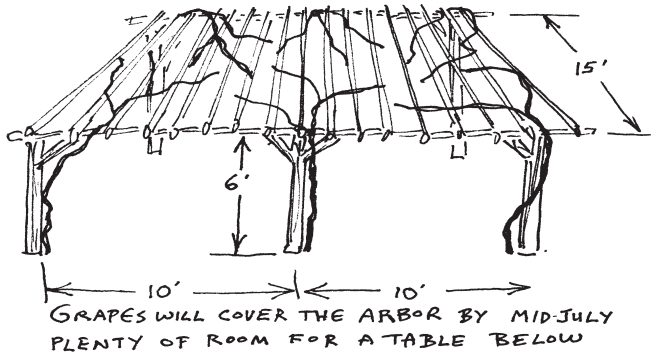
1988: School and life and Fedco Trees.
Bunk: In 1988 we offered 71 items, had 158 orders and $18,000 in sales.…I was teaching school in Fairfield while doing Fedco Trees at the same time.

from Bunk's journal, April 4, 1988:
I dashed home to call all the suppliers to make sure everything is on the way for Fedco Trees. Much to my horror, [our order] is not being sent. A day of panic! … *the next day:* Well I called [the supplier] during what should have been a meeting to go over curriculum. Thank God, they're going to send the trees. I'm walking the tight rope on school, Fedco Trees and life.



Training Grapes on an Arbor

Train one or more vines onto an arbor or gazebo; we have 8 vines, spaced about 10' apart. Prune each vine back to a single trunk. Encourage several permanent arms from each trunk. In late spring remove 70-90% of the past summer's growth. Next summer new fruiting canes will grow off the permanent arms.



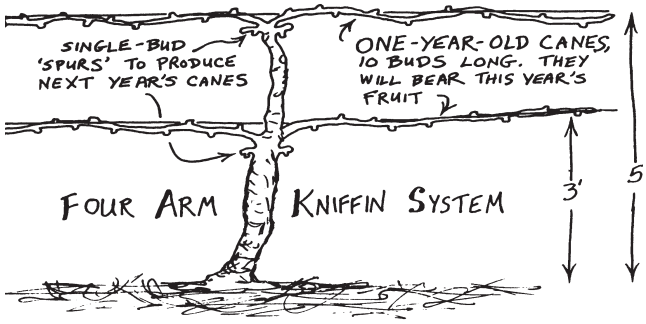
Pruning Grapes in the Four-Arm Kniffin System

First year: After the danger of frost has passed, cut newly planted vines back to a single stem, 6" long with two to three buds.

Second year: Set up two wires, 3' and 5' high, stretched between posts. Cut plant back to a single stem, 6 feet long and tie it to the top wire. Leave 4–6 buds near each wire and remove others.

Third year: Select 8 canes, 4 for each wire, and remove the rest. Tie two canes to each wire, one in each direction. Cut these 4 canes back to 10 buds each. Cut the remaining 4 canes back to 1–2 buds each.

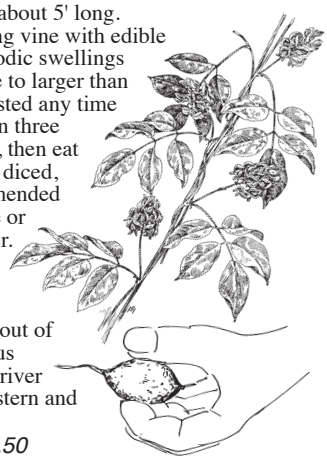
Later years: In late spring, remove last year's fruiting canes. Select eight new canes. Cut 4 of them to 10 buds each, and tie them to your wires. Cut the remaining 4 back to 2 buds each. These will produce next year's fruiting canes. Remove all other canes. The number of buds left on the fruiting canes may be adjusted to encourage more fruit (leave more buds) or larger size (leave fewer buds).


SINGLE-BUD 'SPURS' TO PRODUCE NEXT YEAR'S CANES
ONE-YEAR-OLD CANES, 10 BUDS LONG. THEY WILL BEAR THIS YEAR'S FRUIT
FOUR ARM KNIFFIN SYSTEM
3'
5'

Kiwiberries are not available in 2022. Please check back next year!

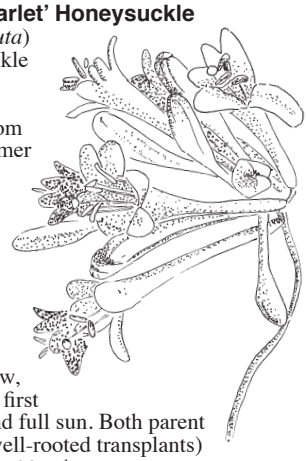
Hardy Vines & Creepers

***Apios americana* Groundnut** Grows to about 5' long. Nitrogen-fixing leguminous perennial twining vine with edible tubers. Roots grow 1–6" deep and have periodic swellings (the groundnuts) that range from marble size to larger than a golf ball. These edible tubers can be harvested any time of year. Delicious, high in starch, and contain three times the protein of a potato! Peel them first, then eat them boiled, roasted, baked, mashed, sliced, diced, puréed or even made into chips. Not recommended raw. Will keep a month or more in the fridge or root cellar, or dry them and they keep forever. Small orchid-like maroon, pink and violet flowers appear in late August in central Maine followed by 2–4" bean pods. Prefers moist sandy soil. Full to partial sun. Keep it out of your garden as it will spread. Can be vigorous and requires a trellis of some sort. Native to river banks and flood plains, southern Canada, eastern and midwestern U.S. Z3. **ME Grown.** (tubers)

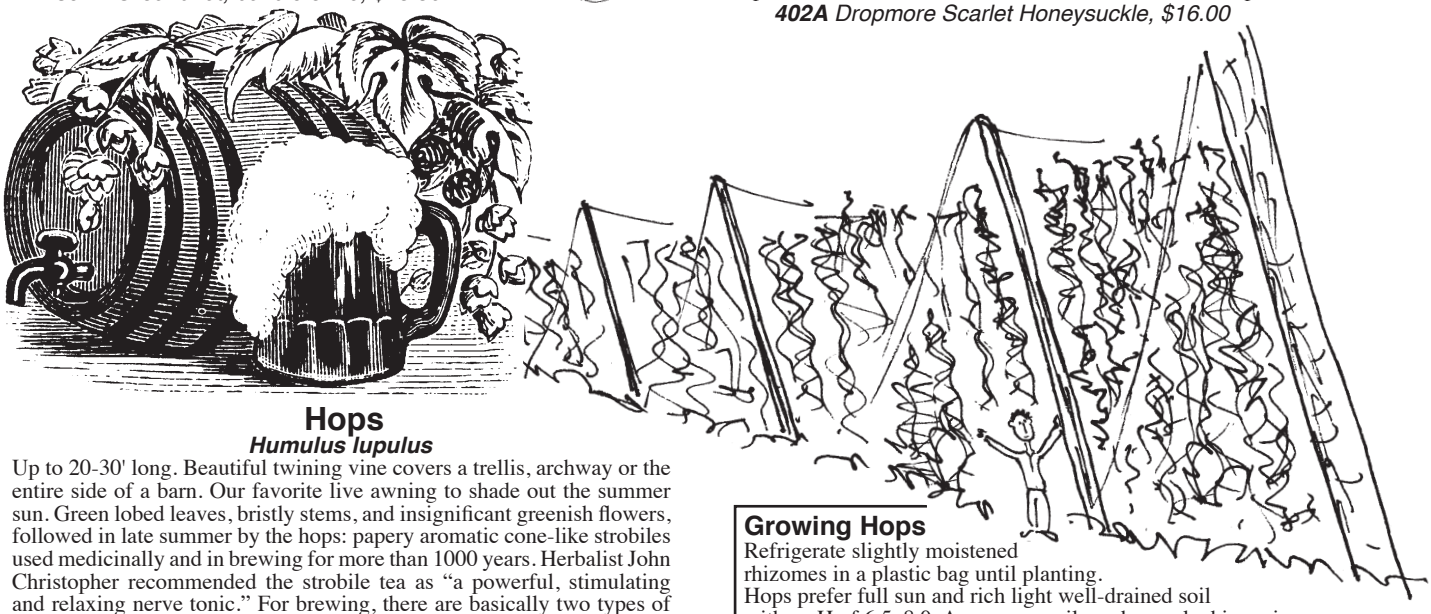


***L397A** Groundnut, bundle of 10, $15.50*

***Lonicera* x *brownii* 'Dropmore Scarlet' Honeysuckle** 10-20' long. (*L. sempervirens* x *L. hirsuta*) Tall climbing (non-invasive!) honeysuckle developed by FL Skinner in Manitoba. Jazzy whimsical whorled clusters of 1 1/2" scarlet-orange tubular flowers bloom profusely and tirelessly from early summer into late fall. Attracts butterflies and bees but especially loved by our ruby-throated hummingbird. Striking blue-green foliage is perfoliate, appearing as if the red stems were growing through a single cupped disk. Finely shredded peeling bark makes an interesting winter display. Great for fence or arbor or cut back like a perennial for a low rangy mound in the garden. Easy to grow, generally free of problems. Flowers the first year. Likes average well-drained soil and full sun. Both parent species native to North America. Z3. (well-rooted transplants)



***402A** Dropmore Scarlet Honeysuckle, $16.00*



Hops

Humulus lupulus

Up to 20-30' long. Beautiful twining vine covers a trellis, archway or the entire side of a barn. Our favorite live awning to shade out the summer sun. Green lobed leaves, bristly stems, and insignificant greenish flowers, followed in late summer by the hops: papery aromatic cone-like strobiles used medicinally and in brewing for more than 1000 years. Herbalist John Christopher recommended the strobile tea as "a powerful, stimulating and relaxing nerve tonic." For brewing, there are basically two types of hops. Aroma hops have a lower percentage of alpha acids and are used for flavoring, finishing or conditioning brews. Bitter hops have more alpha acids and are used to impart bitterness.

Tolerates shade, adapted to most well-drained soils. Dies back to the ground in fall and rebounds more vigorously each year. Plant it where you want it because the extensive root system can be hard to dig up. Native to Eurasia. Z3. (5-6" female rhizomes)

***H. l.* 'Cascade'** USDA 19124 (Fuggle x Serebrianka-Fuggle S) x open-pollinated. OR St U, 1972. Contains 4–7% alpha acids. Fragrantly aromatic hop, low bittering value. For years Cascade has been the most widely used hop in the beer industry. Very productive with large cones, ready to harvest mid-late August in central Maine. A customer wrote, "Cascade has gained impeccable renown as the charismatic hop in such unsurpassable ales as Anchor's Liberty Ale, Sierra Nevada's Pale Ale and McNeill's Firehouse Amber Ale. Nothing 'light' about these." Resistant to downy mildew.

***L398A** Cascade Hops, bundle of 3, $18.25*

***H. l.* 'Chinook'** Petham Golding x select US male. USDA, 1985. A mid to late-season dual-purpose high-alpha hop used commercially in pale ale, IPA, seasonal ales, porter and stout. Spicy aroma has some piney and herbal undertones. Alpha content 12–14%. Medium-compact cones have good storage stability. Disease and insect resistant. **Indigenous Royalties.**

***L399A** Chinook Hops, bundle of 3, $18.25*

***H. l.* 'Sterling'** Mostly Saaz x Cascade, with some open-pollinated German varietals in the background. Dr. Al Haunold intro, 1998. Dual-purpose, most commonly used as an aroma hop but adaptable for a range of uses such as pale ales, IPAs, lagers and dry-hopped brews. Spicy and floral with hints of citrus. Alpha content 6–12%. A great sub for Saaz with way more disease resistance.

***L400A** Sterling Hops, bundle of 3, $18.25*

Growing Hops

Refrigerate slightly moistened rhizomes in a plastic bag until planting. Hops prefer full sun and rich light well-drained soil with a pH of 6.5–8.0. As soon as soil can be worked in spring, till to create a weed-free area. Dig holes about 1' deep and at least 3' apart in rows. Add manure, compost and other slow-release organic fertilizers. Plant 1 or 2 rhizomes per hole, horizontally with the buds pointed up and cover with 1–2" of loose soil. The first year the hop plant requires frequent light watering and mulching.

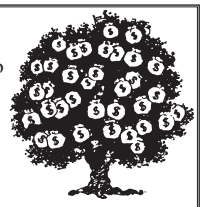
Hops grow vertically, with lateral sidearms extending from the main vine and producing cones. Vines may grow up to 25' in a single season, and do best if they are trained onto strong twine 12–30' high, supported by a trellis, wire, pole, tree branch or south-facing building.

When the young vines are about 1' long, select the 2 or 3 most vigorous vines per hill and remove the rest. Gently wrap the vines clockwise onto a string. Once trained, the vine will guide itself.

Pick the hops when they are papery but still slightly sticky and filled with yellow powder. Harvest dates will vary with the variety and climate. Because most hops are produced out of reach from the ground, it is safest to lower the vines in order to pick the hops. Dry hops thoroughly before use. Spread on screens in a dry attic, they will dry in a few weeks. Dried hops freeze well.

Cut the vines back to the ground after they have been killed by frost. Each spring apply a hearty topdressing of manure and compost. To help control vigor, prune roots by cutting a 2–3' circle with a shovel around the base of the plant in spring.

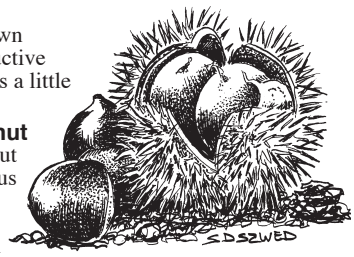
1989: "CR may not have even owned a calculator."



Bunk: This was the first year that the catalog was created on a computer. It's also the first year that Fedco Trees became a major part of my yearly employment. For many years CR helped me to create the annual budget and then came to the pick-up sale where he would check out each customer, doing all the math in his head. Many a customer looked at him in disbelief. We set out all the surplus for the pick-up customers to purchase. This was the beginning of what would become the huge public walk-in sale. We had $32,000 in sales, nearly doubling sales in one year.

Nuts

The nut seedlings we're offering are grown from nuts harvested from the most productive specimens. Like all seedlings, each one is a little different, and nut quality may vary.



***Castanea dentata* American Chestnut** Up to 100' Before 1900 American chestnut was one of the most important deciduous trees in the eastern U.S. The arrow-straight rot-resistant wood was used for everything from mine timbers to musical instruments. Delicious sweet nuts were an important food for wildlife and humans. Chestnut blight showed up in Brooklyn in 1904; within 50 years it killed virtually every chestnut tree in the eastern U.S. The blight does not kill the roots however, and rare stands of mature trees can still be found. In July 2015, the tallest American chestnut in North America was discovered right here in Maine by researchers who spotted the profuse white blossoms from the air. The trees we offer are not immune but are likely to thrive in a suitable site for 10–30 years without blight. Fast growing and straight trunked with a wide-branching magnificent rounded crown. Fragrant white blooms in July. Ribbed sharp-toothed lustrous dark green foliage. Yellow fall color. Prefers loamy well-drained acidic soil and full sun. **Two or more needed for pollination** but will cross-pollinate with Asian, European and hybrid chestnuts. Precocious, bearing heavy crops of nuts in 10 years. From each American chestnut purchase, Fedco will donate $3 to support the American Chestnut Foundation Maine Chapter's traditional breeding program. Z4. **ME Grown.** (1-3')

***405A** American Chestnut, $24.00*

***C.* Hybrid Chestnut Seedlings** 40-60' x 30-40' Truly hybrid crosses of *C. crenata* (Japanese), *C. mollissima* (Chinese), *C. sativa* (European) and *C. dentata* (American). Harvested from healthy trees showing excellent blight resistance. Great flavor, much better than chestnuts from the store, and high annual nut production averaging 20–50 lbs per tree. Use them for roasting, stuffing and soups, or dry them to make flour for baked goods. Typically begin flowering at age 3–5. Prefers loamy sandy well-drained acidic soil. Producing well even during harsh droughty conditions. **Two or more needed for pollination.** Will cross-pollinate with American chestnut. Z4. *Stock is small this year, so we're offering these plants at a reduced price.* (9-12")

***406A** Hybrid Chestnut, $9.00*

Cracking the Nut on GE Trees—Update!

Thanks to all of you who followed our discussion about the genetically engineered chestnut in last year's catalog—it's not too late to get involved.

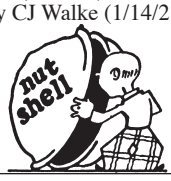
Last year, a petition arrived at the USDA asking for the release of the genetically engineered Darling 58 chestnut tree. If accepted, this GE chestnut would become the first GE tree used in a restoration planting in the U.S. We encourage you to educate yourself about this matter and consider standing with Fedco and the other organizations and scientists against GE trees. See the resources below to learn more about why GE trees are a concern, and sign a petition at stopgetrees.org.

In April 2021, Anne Petermann wrote in *Truthout*, "By October 19, 2020, the close of the public comment period on the petition, 109 organizations, representing millions of members, plus an additional 123,426 individuals had registered their opposition to the D58. The next step is the creation of a draft Environmental Impact Statement (EIS) by the USDA recommending action on the petition. The American Chestnut Foundation estimates this could take up to a year to complete. Following this, another public comment period will be undertaken to review the draft EIS, after which the agency will develop a final EIS with a decision on the petition."

Don Kines of Mountain State Chestnuts in Virginia wrote and introduced us to his decades-long work in back-cross breeding American chestnuts. He said, "I just want to let the folks at Fedco know that I appreciate their stance against the GE tree. Don't lose the faith!… We will have a fully blight-resistant American without having to resort to genetic modification… Keep up the good work."

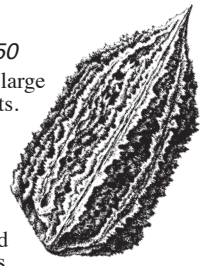
Read all about it!

- First round of public comments on the petition: regulations.gov/search/comment?filter=Darling%2058
- "USDA May Allow Genetically Modified Trees to Be Released Into the Wild" *Truthout* (4/18/21)
- "Campaign to Stop GE Trees–American Chestnut" Common Ground Radio, hosted by CJ Walke (1/14/21)
- The Campaign to Stop GE Trees: stopgetrees.org
- Mountain State Chestnuts: mountainstatechestnuts.com
- American Chestnut Foundation-ME Chapter: acf.org/me
- The American Chestnut Research & Restoration Project at SUNY: esf.edu/chestnut
- econexus.info/publication/briefing-paper-transgenic-trees
- "Restoring the American Chestnut" *In Defense of Plants* podcast (Episode 272)



***Corylus americana* American Hazelnut** 12-18' x 10-15' Also called **American Filbert**. Squirrels, blue jays and humans alike relish the sweet tasty 1/2" nuts of this multi-stemmed rounded native shrub. Usually bears 3–5 years after planting. Collect the crop as soon as the husks begin to brown and lose their sticky yellowness. In central Maine that's around the third week of September. Showy catkins in spring. Dark green serrated foliage in summer. A patchwork of reds, yellows, oranges and greens in autumn. Suckers from the roots. Excellent for naturalizing in thickets. The main pest is nut weevil, which leaves a "hit" mark on the nut shell. (Raking drops and spraying Surround may help with this.) Prefers well-drained soils; pH adaptable. Full sun or light shade. May be self-fruitful but for best nut sets, **plant more than one**, 4–6' apart. Native to U.S. Z4. (1-3')

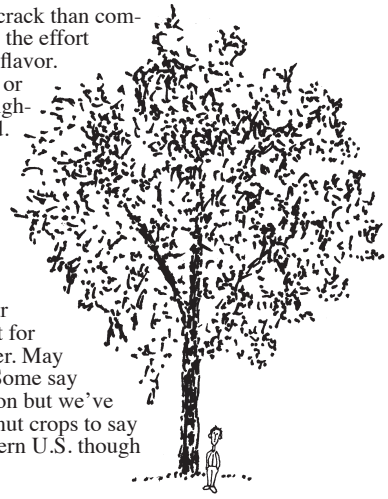
***407A** American Hazelnut, $17.50*
***407B** American Hazelnut, bundle of 5, $72.50*



***Juglans cinerea* Butternut** 40-60' x same. Very large impressive rounded shade tree produces edible nuts. Broad open crown, distinctive compound leaves on large arching branches that can hang nearly to the ground. Leafs out relatively late in spring. Use the oblong edible nut to make oil, or pickle the soft young nut for snacking. Husks yield a yellow-orange dye. Very nice cabinet wood referred to as **White Walnut**. Prefers moist rich deep soils but will grow in dry rocky conditions. Give it full sun and plenty of space. Susceptible to butternut canker, which has devastated many wild specimens. Some lovely old trees are thriving in Belfast and Belmont and may have been back-crossed long ago to include genes resistant to the canker. These seedlings were nuts that we harvested from some of those old Maine trees. **Self-fertile but plant two for more abundant crops.** Native New Brunswick to Georgia. Z3. **ME Grown.** (1-3')

***408A** Butternut, $18.25*

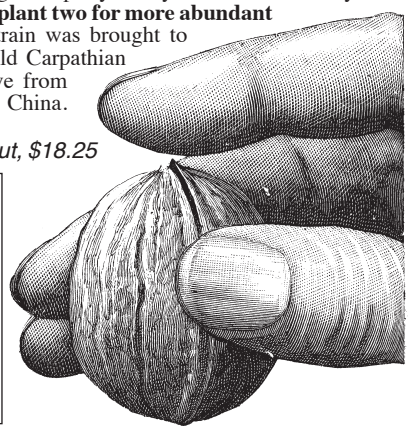
***J. nigra* Black Walnut** 70-90' A spectacular shade tree with a magnificent open rounded crown of massive limbs with dark green leaves. Harder to crack than commercial English walnuts but worth the effort for their distinct sweet earthy rich flavor. Eat them chopped on fresh salads, or with dark chocolate for dessert. Highly valued cabinet and veneer wood. Husks, leaves and roots common in herbal medicine for anti-fungal properties. Husks also yield a rich brown dye. Deep taproot. Prefers moist well-drained soils, pH 6–7. Roots give off a compound called juglone that inhibits some plants, so don't plant one too close to your garden. Space trees about 50' apart for nut production, 20' apart for lumber. May begin to bear fruit in 5–10 years. Some say multiple trees needed for pollination but we've seen enough solo trees with large nut crops to say **you only need one**. Native to eastern U.S. though not quite into Maine. Z4. (1-3')



***409A** Black Walnut, $18.25*

***J. regia* 'Carpathian' Walnut** 30-50' x 40' Species sometimes called **English Walnut** or **Persian Walnut**. Very large open somewhat vase-shaped fast-growing tree with those edible nuts you buy in the store. Traditionally used in Europe for salad oil. Has the same alternate pinnately compound foliage as black walnut but glossy blue-green leaves are larger and more rounded, almost tropical looking, and shells are a bit easier to crack. Prefers light deep dry loamy soil. Bears in 5–7 years. **Considered self-fertile but plant two for more abundant crops.** In the 1930s, this strain was brought to North America from the cold Carpathian Mountains in Poland. Native from southeastern Europe east to China. Z4. **ME Grown.** (1-3')

***410A** Carpathian Walnut, $18.25*



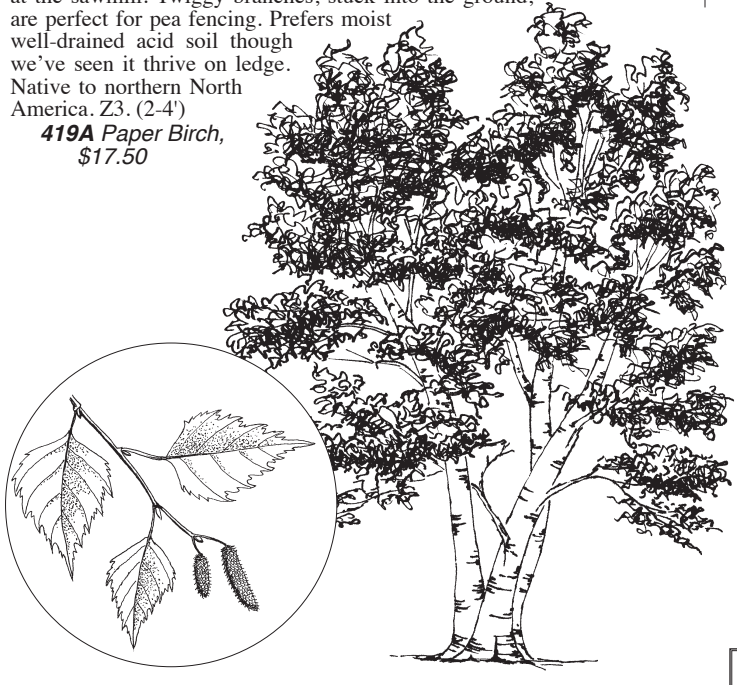
Shade Trees

***Acer saccharum* Sugar Maple** 50-100' Largest of our native maples, also known as **Rock Maple**, valued for shade, syrup and lumber. A New England tradition was to plant a pair of sugar maples in front of the farmhouse on the inhabitants' wedding day. Those "wedding trees" still grace many Maine front yards. Famous for its yellow, gold, scarlet and crimson fall foliage and its fresh sap that's boiled down to make real maple syrup. Huge upright spreading form with light grey bark. Shade tolerant, making it easy to interplant in existing woods. Prefers moist well-drained soils. Cold hardy. Sensitive to salt and air pollution; not a good city tree. Native Quebec to Gulf Coast. Z3. (2-4')

***416A** Sugar Maple, $17.00*

***Betula papyrifera* Paper Birch** 30-70' x 30' Also called **Canoe Birch** or **White Birch**. The classic birch tree. Elegant as a single- or multi-stemmed specimen. Medium-sized tree with an irregular oval shape, upright angled branches and magnificent chalk-white peeling bark. Deep green foliage produces light shade in summer and turns clear yellow in fall. Birds prize the catkins, buds and seeds. Twigs are a favorite deer browse. Bark traditionally used for building canoes, containers and roofing. When traveling in the north country, keep a small bundle of finely shredded bark in your pocket to kindle the nightly fire. Valuable wood at the sawmill. Twiggy branches, stuck into the ground, are perfect for pea fencing. Prefers moist well-drained acid soil though we've seen it thrive on ledge. Native to northern North America. Z3. (2-4')

***419A** Paper Birch, $17.50*

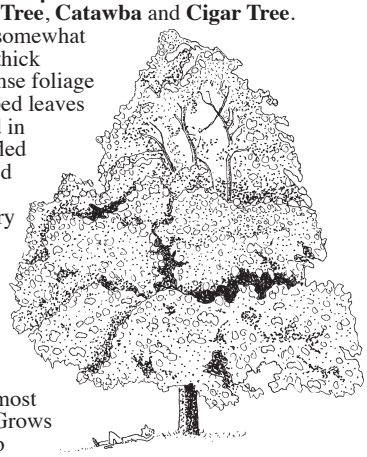


Fedco will not support GE trees. Furthermore, Fedco does not knowingly carry genetically engineered seeds. At our 1996 Annual Meeting, our cooperative voted unanimously not to knowingly offer for sale any genetically engineered variety because the new gene technologies pose unacceptable risks to the environment. For more about this pledge, our commitment to testing for GE contamination, and talks on GE by Fedco founder CR Lawn, please go to fedcoseeds.com/seeds/genetic_engineering.htm

***Carpinus caroliniana* Musclewood** 10-40' x same. Also known as **Blue Beech**, **American Hornbeam**, **Ironwood** and **Water Beech**. A small floodplain or understory tree with long irregular crooked branches and smooth grey ribbed bark. Alternate names each refer to one of its wonderful attributes. Musclewood refers to the sinewy ribbing of the trunk, which resembles a flexed forearm. Smooth grey bluish-tinted bark resembles beech. Ironwood because of its incredible toughness, suitable for tool handles and oxen yokes. Water beech because it can thrive in a flood plain. Bronze-red tomentose foliage in spring turns a striking blue-green color with the season. Bright red, scarlet and orange fall color all at the same time. Prefers deep rich moist slightly acid soil but will handle dry spots. Remarkably adaptable but does not like urban conditions, although the one growing next to the Farnsworth Museum in Rockland is doing well. Full sun to full shade. Native from Canada to Central America. Z2. **ME Grown.** (1-3')

***420A** Musclewood, $17.50*

***Catalpa speciosa* Northern Catalpa** 40-60' Also known as **Western Catalpa**, **Elephant Ear Tree**, **Catawba** and **Cigar Tree**. Fast-growing coarse habit with a somewhat narrow open irregular crown and thick interesting undulant branches. Dense foliage of huge "elephant ear" heart- shaped leaves provides excellent shade. Covered in early summer with clusters of ruffled incredibly fragrant jasmine-scented white blossoms, each dotted with purple and spotted with rich buttery yellow radiating from the throat. Flowers attract bees by day and moths by night. Fruits are long bean-like "cigar" pods. The wood is extremely rot resistant and was once used to make railroad ties in the Midwest. Prefers deep moist fertile soil, but thrives in almost any condition, sun or part shade. Grows rapidly. Remains dormant late into spring. **Self-fertile.** Native to central U.S. Z4. (2-4')

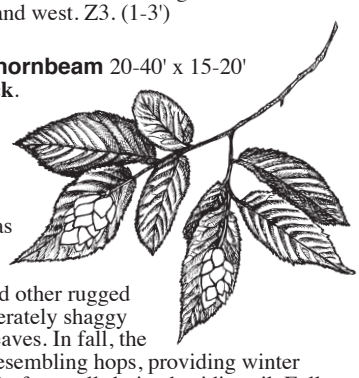


***421A** Northern Catalpa, $16.00*

***Celtis occidentalis* Hackberry** 40-60' x same, but can grow to 100' Long-lived shade tree that will grow in a wide range of conditions. Produces a hard little blue-black fruit, important fall and winter forage for birds and mammals. The larvae of several butterfly species rely on its leaves. Mature specimens exhibit corky ridged bark, spreading crown and slightly arching limbs like its relative the elm, but not as dramatic. A lovely old specimen grows in Belgrade where Laura harvests blueberries. Must have been deposited by a traveling critter because it's the only one around. Very adaptable, tolerates shade, wind and pollution. Loves moist well-drained soils and full sun. Late to break dormancy. Plant and water once and then don't water again until the leaves emerge. Native from southern Quebec to North Carolina and west. Z3. (1-3')

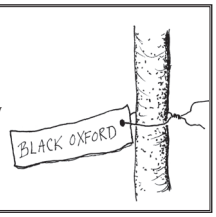
***422A** Hackberry, $16.50*

***Ostrya virginiana* Eastern Hophornbeam** 20-40' x 15-20' Also called **Ironwood** and **Hardhack**. Not to be confused with *Carpinus caroliniana*, Musclewood, which is also referred to as hornbeam. An important small native upland understory tree that is tougher than nails. Called Ironwood because it was traditionally used for sled runners, wagon tongues (the part that hitched to the horses), longbows, and other rugged tools. We use it for ax handles. Moderately shaggy greyish-brown bark and birch-like leaves. In fall, the seeds mature in little papery cones resembling hops, providing winter forage for birds like the chickadee. Prefers well-drained acidic soil. Full sun or partial shade. Can be drought tolerant and thrive on thin gravelly soil, but water well for the first few years while it gets established. Tolerant of pollution and works well in yards. Native Nova Scotia to most of eastern U.S. Z3. (2-4')



***424A** Eastern Hophornbeam, $18.50*

1990: An idea, a small yard, and one tree.
Bunk: We offered our first Trees T-shirt, featuring one of my drawings and a quote from J. Russell Smith: "An idea, a small yard and one tree may be made to produce astounding results." Roberta Bailey joined the Trees staff this year and played a key role for most of the next decade. We wrote out the tree labels with sharpies on our dining table. It was an evening family activity, akin to shelling dry beans.



***Quercus* Oak** Many oaks are native to New England. They are generally divided into two groups: the reds and the whites. The reds have pointier leaves and the whites have rounder ones. Most of them make absolutely breathtaking shade trees, creating a major presence in almost any landscape and providing bountiful forage for wildlife and for humans. The strongly astringent inner bark, foliage and acorn caps are all medicinal, and acorns were an extremely important human food source for thousands of years. Contrary to much of the literature, all acorns are edible, both reds and whites. (For detailed instructions on acorn processing, see Samuel Thayer's book *Nature's Garden*.) The tannins from a handful of oak leaves added to homemade half-sours will keep pickles crisp for months. **Oaks are monoecious so you need only one to get acorns.**

***Q. alba* White Oak** 50-80' x same. Spectacular broad irregularly rounded oak with low-lying branches that stretch out horizontally from the trunk, sometimes as far as 50'. Bark is finely grooved and etched. Wood is valued for lumber and firewood. Once common along the Maine coast, it was almost entirely stripped for boat-building lumber more than a century ago. Some extremely fine specimens in Maine grow on Swan Island in the Kennebec River. Soil adaptable, though prefers deep moist well-drained acid conditions, full sun. Thrives where fallen leaves can be left around the base; avoid soil compaction, even foot traffic. Disease and insect resistant, drought tolerant. Slow growing and extremely long-lived. Native to eastern U.S. Z3. **ME Grown.** (1-3')

***425A** White Oak, $18.50*

***Q. bicolor* Swamp White Oak** 50-60' x same. Also called **Bicolor Oak**. A massive rounded shade tree with a short deeply ridged trunk and a fan of branches, the uppermost ascending and the lower drooping. The contrast between the light grey bark and the dark trunk fissures is particularly striking. Called Swamp White in recognition of its affinity for the wild low wetlands that once peppered eastern North America before the days of the parking lot and the Big Box. Called Bicolor because its large thick leathery lobed leaves have a glossy dark green upper surface and a white to greyish-green hairy felty underside. Its large 1 1/2" sweet acorns are highly attractive to wildlife, particularly waterfowl, sapsuckers and (ugh) squirrels. Its yellow to reddish-purple fall foliage persists until spring. Prefers moist acid soils where drainage is poor, but exhibits excellent drought resistance as well. Very fast growing once established. Native to northeastern U.S. Z3. **ME Grown.** (1-3')

***426A** Swamp White Oak, $18.50*

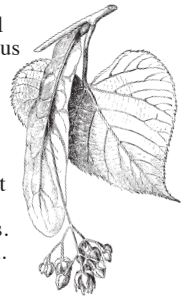
***Q. macrocarpa* Bur Oak** 70-80' x same. Hardiest of the white oaks with a deeply grooved massive trunk and a wide-spreading crown of huge branches. Small branches are distinctively corky, winged and tend to twist and kink. The habit is upright and somewhat vase-shaped. Lustrous dark green foliage and large 1–2" acorns, each almost entirely enclosed in a fringed cup. These are edible and low in tannic acid; when roasted they supposedly make a decent coffee substitute. The most urban-tolerant oak. Fairly fast growing. Needs full sun but adaptable to a wide range of soil types including clay. Native to eastern U.S. and Canada. Z3. (1-3')

***427A** Bur Oak, $18.50*

***Salix alba* 'Tristis' Niobe Weeping Willow** 50x50'
The classic weeping willow, a very large majestic graceful wide-spreading tree. Golden drooping branches, which can hang to the ground, are used for basket weaving; golden bark and leaves used medicinally. Harvest twiggy branches in early spring to make a tincture. Buzzes with life when May flowers attract loads of pollinating bees. Native to southern Europe and western Asia. Z4. (2-4') (More willows on page 48.)

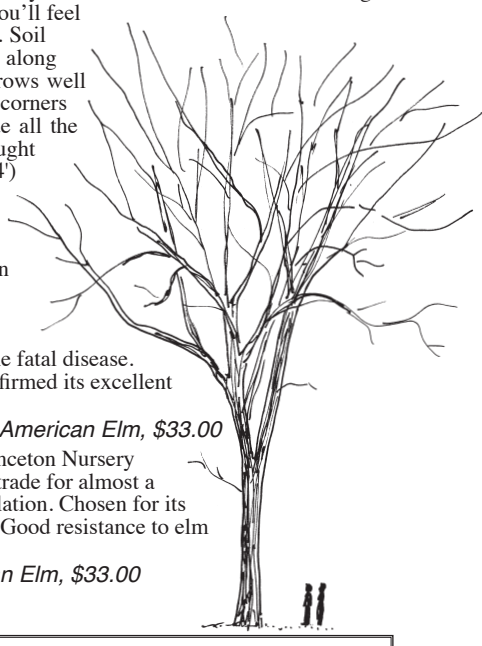
***430A** Tristis Niobe Weeping Willow, $16.00*

***Tilia americana* American Linden** 60-80' x same. Also known as **Basswood**, **Butterwood** and **Lime**. Tall stately long-lived tree with rounded crown and numerous low-hung spreading branches. Sweetly fragrant yellow June flowers will attract all the bees in the neighborhood, make the best honey, and also make a popular after-dinner tea and stomach remedy. Sprinkle them on your salad for a festive treat. The young half-size foliage makes a high-quality salad green. Excellent carving wood. Fibrous inner bark used for making cordage. Yellow fall color. Prefers deep rich moist soils. Full sun or partial shade. Sensitive to salt and pollution. Native from New Brunswick to Virginia. Z3. (2-4')



***431A** American Linden, $17.00*

***Ulmus americana* American Elm** Large fast-growing graceful native once lined virtually every street in New England but declined dramatically due to Dutch elm disease. Fortunately, several disease-resistant cultivars have been introduced. At maturity the trunk can be 4' (even up to 8'!) in diameter with an immense vase-shaped canopy. Long pendant branches blow and sway in a hazy breeze on hot summer days. One of the most wonderful shade trees for northern climates. We're infatuated with them. If you find yourself in Castine, ME, visit the huge old elms lining every street; you'll feel like you stepped back in time. Soil adaptable, prefers moist areas along rivers and streams but also grows well in drier places. Plant off the corners of a house and they'll provide all the shade you need. Salt and drought tolerant. Plant more elms! (2-4')



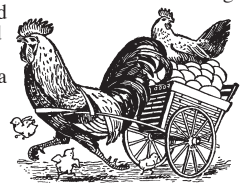
***U. a.* 'Prairie Expedition'**
60' x 35-40' ND St U Res Foundation, 2004. New selection from a wild specimen growing along the Wild Rice River near Fargo, ND. A lone survivor surrounded by other trees that had succumbed to the fatal disease. Further studies at U Minn confirmed its excellent resistance. Z3.

***432A** Prairie Expedition American Elm, $33.00*

***U. a.* 'Princeton'** 60x70' Princeton Nursery intro, 1922. A standard in the trade for almost a century and still in wide circulation. Chosen for its high resistance to the disease. Good resistance to elm leaf beetles, too. Z4.

***433A** Princeton American Elm, $33.00*

1992: Fedco moves to yet another chicken barn.
Bunk: Fedco Seeds and Fedco Trees moved into the renovated chicken barn on the Bellsqueeze Road in Clinton. The moment I saw it, I knew it would be perfect for Trees. Up until this time, the Trees crew and the Seeds crew had very little overlap. The move to Clinton allowed us to become one integrated company. We even shared our one telephone. Nikos (the Seeds purchaser) and I sat in the same room with the phone. The instant she hung up, I would grab it and make a call. She would wait impatiently to make the next call. Back and forth we would go, sometimes all day long. It was a real lesson in collaboration. For at least a year, we ran the company with one phone.



Gene Frey and I added a few of my drawings to the 1992 catalog, still five sheets of paper, stapled in the corner. It was the first year of graphics in the Trees catalog.

Conifers

***Abies balsamea* Balsam Fir** 45-75' One of the most abundant of our native conifers. Narrow, conical, smooth-barked. Twigs, inner bark, needles and sap are all medicinal. Small "blisters" contain a transparent aromatic resin that has been traditionally used as an inhalant for headaches and congestion, and as a salve for cuts and arthritis. Needle tea is rich in vitamin C. The fragrant boughs are a favorite for wreaths; the needles used in scented pillows and pot-pourri. The best of all conifers for a Christmas tree! Prefers well-drained moist acid soil. Avoid polluted areas. Semi-shade tolerant, slow growing. Good hedge or specimen tree, songbird nesting area or rabbit thicket. Native from Labrador to upper eastern U.S. Z3. (6-12")

***437A** Balsam Fir, bundle of 5, $19.00*

***Metasequoia glyptostroboides* Dawn Redwood** 100' One of the most spectacular of the ornamental trees. The wide irregular trunk looks like something out of a fairy tale with its iridescent golden-orange bark that becomes deeply grooved, hollowed and fluted with age. The bright green deciduous needles turn orange in the fall. Grows quickly, up to 50' in 15–20 years, with many small-diameter horizontal branches and a uniform conical habit. Give it lots of space! Highly adaptable, easy to transplant. Prefers moist deep well-drained slightly acid soil and full sun. Will tolerate wet or dry sites. Pollution resistant. Good specimen or street tree; rarely needs pruning. Fossils dating back 50 million years have been found in Japan. Considered extinct until it was "rediscovered" in central China in 1941. Resembles California redwood only vaguely. Native to China and Japan. Z4. **ME Grown.** (1-3')

***438A** Dawn Redwood, $16.75*

***Picea abies* Norway Spruce** 80-100' Fast-growing wide-spreading upright picturesque tree with graceful long pendulous branches that often reach the ground. Largest of the spruces. If you go to the Mt. Auburn Cemetery in Cambridge, MA, don't miss the ancient Norway spruce just inside the front gate. Several of its massive drooping branches have rooted and turned into secondary trunks. It is truly amazing. Orange-brown scaly bark. Excellent lumber. Showy 4–6" cones. Bright green foliage. Plant in full sun to part shade. Prefers loam but tolerates poorer soils better than other spruces. Native to northern Europe. Z2. (14-20")

***439A** Norway Spruce, bundle of 5, $20.00*

***P. glauca* White Spruce** 60-80' Conifer native to boreal forests, subalpine regions and Acadian forests of North America ranging from Alaska to Newfoundland. Northernmost trees nearly reach the arctic and will withstand winter lows of –70°. Diameter of trunk reaches up to 2'. One of the best trees for wind blocks and privacy screens. Wood commonly used for lumber, pulp and paddles. Harvest bright green spruce tips in late May to early June and process into citrusy sugar, syrup, vinegar or cordials. High in vitamin C. Adaptable and tolerant to wind, drought and cold. Full sun. Z2-6. **ME Grown.** (10-14")

***440A** White Spruce, bundle of 5, $20.00*

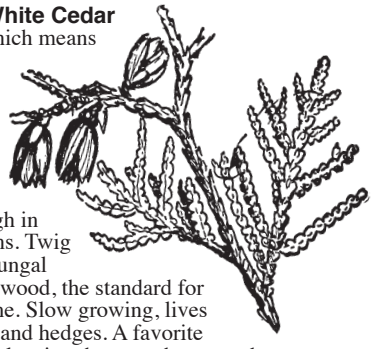
***P. pungens var. glauca* 'Misty Blue' Colorado Blue Spruce** 30-60' Very popular specimen tree with truer blue foliage than other varieties. Excellent for privacy screens, as it is fast growing after 3'. A beautiful stand of blue spruce is on Rt. 139 in Benton, just before you cross the Sebasticook River. Plant in full sun to part shade. Does not like wet soil. Extra spring nitrogen will improve blue color, which doesn't appear for first few years. Native to western U.S. Z2. (12-18")

***441A** Misty Blue Colorado Blue Spruce, bundle of 5, $20.00*

***Pinus strobus* Eastern White Pine** 100-130' or more. The largest northeastern conifer. Magnificent and massive when mature. Smooth greyish-green bark becomes thick, rough and deeply furrowed with age. A cup of pine needle tea has more vitamin C than a cup of orange juice; Native Americans showed early white explorers how to brew it and stave off scurvy. The resin has numerous practical and medicinal applications. Excellent wood with a thousand uses. When grown in abandoned fields, "wolf pines" develop huge curving branches. Grown in the forest it will typically be "clear" for the first 30–80'. Planted thickly and sheared, it makes a beautiful hedge that won't drop its lower branches. Likes ordinary to poor—even sandy—soil. Shade tolerant, but does not like salt or roadsides. Fast growing. Native to eastern U.S. Z3. **ME Grown.** (10-14")

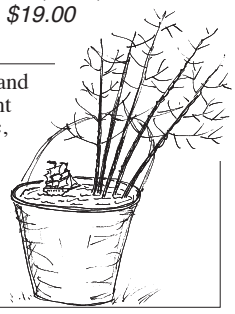
***442A** Eastern White Pine, bundle of 5, $20.00*

***Thuja occidentalis* Eastern White Cedar** 20-60' Also called **Arborvitae**, which means 'tree of life.' Common throughout all of Maine although some stands have been depleted by overcutting. Narrow and tall with twiggy branches, soft fibrous orange-brown bark, and flat foliage unlike that of any other conifer. Foliage and bark tea is high in vitamin C and helps fight infections. Twig decoction makes an antiviral antifungal skin wash. Valuable light fragrant wood, the standard for fence posts and log cabins in Maine. Slow growing, lives up to 400 years. Good for screens and hedges. A favorite browse of deer. Pruning limbs and leaving them on the ground during a harsh winter helps sustain these animals and is a long-practiced tradition in the forests of Maine. Thrives in rich moist marshy neutral-to-alkaline soils. Plant in full sun to part shade. Z2. (8-14")



***443A** Eastern White Cedar, bundle of 5, $19.00*

Agri-gel A hydrogel formulation that absorbs and holds water. The swollen crystals adhere to plant roots, reducing transplant shock. Safe, nontoxic, easy to use. Useful for garden seedlings as well as woody plants. Highly recommended for raspberries and conifers. Half-ounce packet mixed with 1 to 3 gallons of water will treat up to 100 cane plants, or 50 trees and shrubs. Not allowed for organic certification. 1/2 oz.



***L627A** Agri-gel, $4.00*

Growing Conifers

Conifers tolerate a wide range of soil conditions, but prefer a pH between 5.5–6.5. If you are planting in dry or well-drained areas, dip tree roots in a solution of Agri-gel before planting to protect roots from drying out. Do not use Agri-gel in heavy clay soils or wet areas. Do not soak conifers in the Agri-gel solution; a good dipping is sufficient.

Before planting, prune off a third of the roots. Dig a small hole or make an incision with a spade or planting bar and slip the tree in to the level it grew in the nursery, never below. Fan the roots out; do not wind them around in the hole. It is better to prune the roots than to crowd them in the hole. Water well and pack the earth down with your feet to remove air pockets.

Young conifers need 3/4–1" of rain per week. Periodic deep waterings are far more beneficial than frequent sprinklings. Fertilization is not necessary in the first year. In later years you may fertilize around the drip line.

To make evergreens dense and compact, remove central leader and center bud on the end of each side branch.

1993: John creates a Maine tradition from a marker and a bedsheet. ***Bunk:*** This was the first year Fedco had a tent at Common Ground Fair. I created that first apple display with 48 apples set out on a bedsheet marked into squares with a sharpie. The apple display has since become a fixture of the Fair for over 25 years. The catalog remained five stapled sheets of paper, but the type became a bit smaller, the descriptions more detailed and the graphics more numerous. For the first time we included classic line art images. We had 500 orders, sold 31,000 plants and had $77,000 in sales.

Ordering Instructions

Order online at fedcoseeds.com/trees.

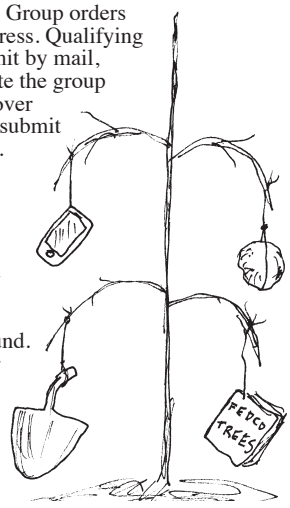
Or mail your order form to: **Fedco Trees, PO Box 520, Clinton, ME 04927.** Please use a current catalog, as prices and selection vary year to year!
• Use the 2022 order form; submit as many pages as you need using our exact format. Print an order form from our website to make this easier.
• Keep a copy of your order for your records.
• We do not take fax or phone orders.

Volume discounts apply to orders submitted by January 14, 2022, with subtotals of $100 or more. Must be shipped to one address only. Sorry, no volume discounts on later orders. See order form for details.

Scionwood orders and early shipment of rootstock: Order online or use the order form on pages 37-38.

Group orders

Talk your neighbors into going in on an order. Group orders are processed as one order shipped to one address. Qualifying discounts apply to the group subtotal. To submit by mail, collect all order forms for your group, calculate the group totals onto an additional order form as your cover sheet, and send it all in with one payment. To submit online, visit fedcoseeds.com/trees/groups.htm.



Substitutions

When dealing with live plants, we can never be certain that we can fill your entire order. If something becomes unavailable, our default mode is to substitute a similar variety because most people prefer a similar tree or plant to a refund. On the order form, if you indicate you don't want any substitutions, we'll send a refund. You'll have the option to donate some of your refund to the Maine Heritage Orchard.

Tax Exemption

Farmers: Please send us a copy of your farm exemption. Otherwise we must charge sales tax.

Shipping Restrictions

Some states have restrictions on imported plants. Please check this list to make sure you're not trying to order something that's restricted in your area.

*** We do not ship any plants outside the U.S. ***

AZ: *Juglans* spp. Walnut
CA: *Castanea* spp. Chestnut; *Juglans* spp. Walnut; *Pinus* spp. Pine; *Quercus* spp. Oak
CO: *Artemisia absinthium* Wormwood. Some counties prohibit *Prunus* spp. Cherry, Peach, Plum. Please check your county regulations.
FL: *Castanea* spp. Chestnut; *Cornus* spp.; *Quercus* spp. Oak
GA: *Vaccinium* spp. Blueberry, American Cranberry
HI: *Pinus* spp. Pine
ID: *Humulus lupulus* Hops; *Mentha* spp. Mint; *Vitis* spp. Grape
IN: *Fragaria* spp. Strawberry; *Rosa* spp. Rose
KS: *Juglans* spp. Walnut
MD: *Asparagus*
MI: *Abies* spp. Fir; *Vaccinium* spp. Blueberry, American Cranberry, Lingonberry
MT: *Pinus* spp. Pine
NC: *Asparagus*
ND: *Artemisia absinthium* Wormwood
NJ: *Rosa* spp. Rose
NV: *Allium* spp. Chives, Flowering Onion; *Mentha* spp. Mint
NY: *Vitis* spp. Grape
OR: *Allium* spp. Chives, Flowering Onion; *Castanea* spp. Chestnut; *Corylus* spp. Hazelnut; *Humulus lupulus* Hops; *Quercus* spp. Oak; *Sambucus nigra* European Elderberry; *Ulmus* spp. Elm; *Vaccinium* spp. Blueberry, American Cranberry; *Vitis* spp. Grape
SD: *Artemisia absinthium* Wormwood
TX: *Juglans* spp. Walnut
WA: *Allium* spp. Chives, Flowering Onion; *Artemisia absinthium* Wormwood; *Castanea* spp. Chestnut; *Corylus* spp. Hazelnut; *Humulus lupulus* Hops; *Vaccinium* spp. Blueberry, American Cranberry, Lingonberry; *Vitis* spp. Grape
WI: *Artemisia absinthium* Wormwood; *Mentha* spp. Mint

Plants in soil medium cannot be shipped to the following states: AK, AL, AR, AZ, CA, HI, ID, KS, MS, MT, ND, NE, NM, NV, OK, OR, SD, TX, UT, WA.

The following plants come in soil: *Achillea millefolium* 'Oertel's Rose', 'Paprika' and 'Terra Cotta'; *Alcea* Hollyhock; *Arctostaphylos uva-ursi* Bearberry; *Armeria splendens* Sea Thrift; *Asarum canadense* Wild Ginger; *Calluna vulgaris* Heather; *Cornus canadensis* Bunchberry; *Delphinium*; *Digitalis* Foxglove; *Erica cinerea* Bell Heather; *Gaultheria procumbens* Wintergreen; *Pulsatilla vulgaris* Pasque Flower; *Rubus* Nelson Blackberry; *Salix* spp. Willow (except Niobe Weeping); *Sempervivum* Hens & Chicks; *V. corymbosum* Highbush Blueberry; *V. macrocarpon* American Cranberry; *V. vitis-idaea* Lingonberry

Deadlines

• Volume discount deadline is January 14, 2022.
• Scionwood order deadline is February 18, 2022.
• Final order deadline (except scionwood) is March 4, 2022.

Pickup

We are no longer offering a pickup option.

Shipping Rates

• We ship via FedEx or USPS Priority Mail; our choice unless you specify.
• **Maine** customers pay only a $10 flat-rate shipping fee.
• **Alaska** shipments are sent via USPS Priority Mail. Please include a postal address. *This rate also applies to anyone in the Lower 48 who requires postal delivery.*

• **Small & Light shipping** applies only to orders that exclusively contain item numbers beginning with L: perennials, bulbs, strawberries, rhubarb, hops, asparagus, scionwood, and more. If you order any other items in addition to these, you must pay the regular shipping charges.

Shipping Schedule

• Scionwood and early rootstock orders ship **around March 14**.
• We ship everything else **approximately March 29 through May 6**. We begin with warmer areas, working our way to coldest areas last. We do not ship outside of this range of dates.
•If you provide an email address, you will receive an automatic email confirmation with the FedEx or USPS tracking number when it leaves our warehouse.
• If you're in New England, your order may take 1-2 business days to arrive. Outside New England, it may take several business days.

• **No Special Ship Dates!** We cannot accommodate specific ship date requests or guarantee your order will arrive on a certain day. If you are out-of-town during our shipping dates, consider having your plants shipped to a friend or neighbor to care for them until you return.
• We will keep our website updated with our **approximate** shipping schedule by state so you can get an idea of when your order will ship. Check our website in the spring for more info.

Out of Stocks

We fill all orders on a first-come first-served basis. Some customers wonder why we don't contact them when something on their order is out of stock. We understand the disappointment. Some of our stock arrives in November to be stored through the winter, but much more of it arrives in early spring just before—or even during—shipping. When we don't know about a shortage or crop failure or damage until the last minute, it's impossible to contact customers individually. We will issue you a refund. Please accept this as a condition of ordering.

Handling Charges

We charge $10 for handling each time you adjust your order. Additions and deletions are costly for us to process. You are welcome to place as many separate orders as you wish.

Cancellation Policy

If you must remove items after our final order deadline, we will charge a $20 fee. If you must cancel after the deadline, we will retain a $20 fee or 20% of the order total, whichever is greater. *Please don't make us do this*. Unlike most businesses, we take orders from this catalog for about five months and then fulfill them all in a span of a few weeks. When we receive last-minute cancellations or order reductions after we've closed for ordering, we can't exactly restock the plants we've designated for your order.

Plant Sizes

Unfortunately, we can't take requests for particular plant sizes or branching preferences. We grade for healthy trees with excellent root systems. Sizes listed for each item should be considered an average. The trees and shrubs in your order will sometimes be slightly larger and occasionally smaller than these projections.

Order form missing? Download another from fedcoseeds.com/requests.htm.

Fedco Trees 2022

PO Box 520 Clinton, ME 04927
www.fedcoseeds.com

(From mailing label) CC-

Farm or Group Name

Name

US Mail Delivery Address

Town St Zip

Street Address (if different)

Town St Zip

Phone

Email

FEDCO TREES
Garden · Farm · Orchard

Volume discount cutoff:
January 14, 2022
Final order deadline:
March 4, 2022

Visit **fedcoseeds.com** to check product availability.

Delivery:

☑ **Ship** in late March to early May.
Sorry, no pickup option or Tree Sale in 2022.
Maine customers only: $10 flat-rate shipping!
We cannot accommodate specific ship date requests.

Substitutions:

	Yes	No
I will accept a similar variety.	❑	❑
I will accept similar rootstock. (Applies to apple trees only.)	❑	❑

Volume Discounts: *(only orders received by* **1/14/22***)*

Subtotals $100 and over	take 5% off
$300 and over	take 10% off
$600 and over	take 15% off
$1200 and over	take 20% off

Shipping Rates

Maine	$10 flat rate for all ME orders.	
	Adjusted Total	**Shipping Charge**
Continental US (other than Maine)	Up to $141.00	$22.50
	Over $141.00	16% of Adjusted Total
Alaska or **postal delivery required**	Up to $125.00	$25.00
	Over $125.00	20% of Adjusted Total
All item #s begin with **L** **Small & Light Shipping**	Up to $63.00	$10.00
	Over $63.00	16% of Adjusted Total

Sales Tax:

ME addresses	—	Pay 5.5% sales tax on Adjusted Total
MA, MD, VA	—	Pay your local tax rate on Adj Total
IL, IN, KS, KY, MI, MN, NC, NJ, NY, OH, PA, RI, VT, WI, WV	—	Shipping is taxable – pay your local tax rate on **Adj Total + Shipping**

Subtotal from reverse	
Volume Discount	–
1% Fedco Member Discount from Subtotal	–
Adjusted Total	=
Shipping	+
Sales Tax	+
Total	=
Donate to MeHO (Maine Heritage Orchard, see p. 14)	+
Donate to Wild Seed Project (see p. 63)	+
Grand Total	=

- **We ship via FedEx or Priority Mail, our choice.**
- If you *require* postal delivery, use the Alaska/Postal rates.

Payment:

- We accept payment by check, money order, or credit/debit card.
- Please makes checks payable to **Fedco**.
- Orders under $25: please pay by check or money order.

We accept Visa, MasterCard, American Express and Discover Card. Exp. Date

Help support
Maine Heritage Orchard
by donating refunds for out-of-stock items or overpayments.

❑ Donate all my refund to MeHO
❑ Donate up to $5.00
❑ Donate up to $2.00

Fedco Trees 2022: Trees, Shrubs & other Plants

For **scionwood and early shipment of rootstock**, order online or use the next form.

	Item #	Qty	# Plants per pkg	Name	Price Each	Total Price
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
					Subtotal	

If you are ordering more than 28 items, copy this page or our format and submit as many pages as you need. You can download another form at fedcoseeds.com/requests.htm.

If you order *only* item numbers beginning with **L**, you qualify for our **Small & Light shipping rate**. See other side for details.

Order Comments:

Fedco Trees 2022

Scionwood

PO Box 520 Clinton, ME 04927

www.fedcoseeds.com

Orders for scionwood and early shipment rootstock must be submitted by **February 18, 2022**

(From mailing label) CC-

Farm or Group Name

Name

US Mail Delivery Address

Town St Zip

Street Address (if different)

Town St Zip

Phone

Email

Delivery:

☑ Ship around March 14.
Sorry, we cannot ship scionwood at other times.

Shipping Rates		
Maine	$10 flat-rate for all ME orders.	
	Adjusted Total	**Shipping Charge**
All item #s begin with **L** **Small & Light Shipping**	Up to $63.00	$10.00
	Over $63.00	16% of Adjusted Total
Continental US (other than Maine)	Up to $141.00	$22.50
	Over $141.00	16% of Adjusted Total
Alaska or **postal delivery required**	Up to $125.00	$25.00
	Over $125.00	20% of Adjusted Total

Sales Tax:		
ME addresses	—	Pay 5.5% sales tax on Adjusted Total
MA, MD, VA	—	Pay your local tax rate on Adj Total
IL, IN, KS, KY, MI, MN, NC, NJ, NY, OH, PA, RI, VT, WI, WV	—	Shipping is taxable – pay your local tax rate on **Adj Total + Shipping**

Scionwood Total (from reverse)	
Rootstock Total (from reverse)	+
Subtotal	=
1% Fedco Member Discount	–
Adjusted Total	=
Shipping	+
Sales Tax	+
Grand Total	=

(Please make checks payable to **Fedco**.)

Scionwood, or scions, are twigs for grafting. They are $5 each and are approximately 8" long. **For larger quantities consider buying by the foot**: 10-foot minimum per variety, $4.50 per foot. Scionwood quantities are limited, so order early.

We will ship scionwood and early rootstock orders around March 14, 2022. Scionwood-only orders may ship a little sooner; orders with rootstock may ship a little later. Remain calm. **You will receive an email notification when your order ships.** We routinely send scions and rootstock during cold and freezing weather. They are fine in their packaging no matter how low the temps are during shipping. It's also not unusual for packages to be delayed by snowstorms. Even if your order spends an extra couple days in transit or your scions have icicles hanging off of them, the plant material will still be OK to use. However, **we are not responsible for the quality of plant material in the event your package is not promptly picked up or opened.**

Please note: We try to provide wood that is close to ¼" in diameter. When only smaller wood is available and we consider it usable, we send it. We do not issue refunds or replacements based on diameter of wood. Nature is variable and some varieties do not grow large wood. We expect that you know how to graft and will adjust your grafting methods to meet the materials. If the wood is too small to use the whip-and-tongue method, let the bark slip on the stock and make a bark graft instead. No refunds for leafed-out rootstock—it's fine for use.

- **We ship via FedEx or Priority Mail, our choice.** If you *require* postal delivery, use the Alaska/Postal rates.
- **For more information about storing and collecting scionwood**, see page 39.
- **For descriptions of scionwood varieties**, please check our website: fedcoseeds.com/trees.
- **For grafting supplies**, please refer to our Seeds & Supplies catalog, or visit fedcoseeds.com/ogs.

We accept Visa, MasterCard, American Express and Discover Card. Exp. Date

Help support the Maine Heritage Orchard:

- ❑ Donate all my refund to MeHO
- ❑ Donate up to $5.00
- ❑ Donate up to $2.00

Fedco Trees 2022: Scionwood

Apples	# sticks	# feet
L-801 American Summer Pearmain		
L-802 Arctic		
L-803 Arkansas Black		
L-804 Aroostook Sunset		
L-805 Ashmead's Kernel		
L-806 Aunt Penelope Winslow		
L-807 Baldwin		
L-808 Ben Davis		
L-809 Bitter Pew		
L-810 Black Oxford		
L-811 Blenheim Orange		
L-812 Blue Pearmain		
L-813 Brandywine		
L-814 Bullock		
L-815 Burgundy		
L-816 Calville Blanc d'Hiver		
L-817 Canada Reinette		
L-818 Canadian Strawberry		
L-819 Cellar Hole Bitter		
L-820 Centennial		
L-821 Chenango Strawberry		
L-822 Cherryfield		
L-823 Chestnut		
L-824 Cole's Quince		
L-825 Cora's Grand Greening		
L-826 Cortland		
L-827 Cox's Orange Pippin		
L-828 Crimson Beauty		
L-829 Dabinett		
L-830 Duchess of Oldenburg		
L-831 Empire		
L-832 Esopus Spitzenburg		
L-833 Fallawater		
L-834 Fameuse		
L-835 Fiesta		
L-836 Fletcher Sweet		
L-837 Freedom		
L-838 Frostbite		
L-839 Fuel Service		
L-840 Gala		
L-841 Gideon		
L-842 Gnarled Chapman		
L-843 Golden Ball		
L-844 Golden Russet		
L-845 GoldRush		
L-846 Gray Pearmain		
L-847 Green Kerr		
L-848 Grimes Golden		
L-849 Haralson		
L-850 Harrison		
L-851 Harry Masters Jersey		
L-852 Hewe's Virginia Crab		
L-853 Honeycrisp		
L-854 Honeygold		
L-855 Jonathan		
L-856 Kavanagh		
L-857 Keepsake		
Column 1 Total		

	# sticks	# feet
L-858 Kennebec Russet		
L-859 King David		
L-860 King of Tompkins County		
L-861 Kingston Black		
L-862 Koidu Reinette		
L-863 Kola		
L-864 Liberty		
L-865 Lodi		
L-866 Macoun		
L-867 Martha Crab		
L-868 McIntosh		
L-869 Medaille d'Or		
L-870 Melrose		
L-871 Milden		
L-872 Milo Gibson		
L-873 Milwaukee		
L-874 Munson Sweet		
L-875 Mutsu		
L-876 Nodhead		
L-877 Northern Spy		
L-878 Northern Sweet		
L-879 Northwestern Greening		
L-880 Opalescent		
L-881 Orr's Island Cemetery		
L-882 Peach of Montreal		
L-883 Pipsqueak		
L-884 Pomme d'Or		
L-885 Pomme Grise		
L-886 Porter's Perfection		
L-887 Primate		
L-888 Priscilla		
L-889 Red Astrachan		
L-890 Red St. Lawrence		
L-891 Redfield		
L-892 Rhode Island Greening		
L-893 Ribston Pippin		
L-894 Roxbury Russet		
L-895 Rusty Knickers		
L-896 Screen Shot		
Column 2 Total		

	# sticks	# feet
L-897 Sidrunkollane Talioun		
L-898 Spice Sweet		
L-899 St. Edmund's Russet		
L-900 St. Lawrence		
L-901 Starkey		
L-902 State Fair		
L-903 Sweet Bough		
L-904 Sweet Sal		
L-905 Sweet Sixteen		
L-906 Tarecap Bitter		
L-907 Tater House		
L-908 Tetofsky		
L-909 Thompson		
L-910 Tolman Sweet		
L-911 Trailman		
L-912 Wealthy		
L-913 Westfield Seek-No-Further		
L-914 Whitney Crab		
L-915 Wickson		
L-916 Williams Pride		
L-917 Windham Russet		
L-918 Winekist		
L-919 Winn Russet		
L-920 Winter Banana		
L-921 Winthrop Greening		
L-922 Wolf River		
L-923 Yellow Bellflower		
Pears		
L-924 Bartlett		
L-925 Comptesse Clara Frijs		
L-926 Luscious		
L-927 Nova		
L-928 Patten		
L-929 Seckel		
L-930 Stacyville		
L-931 Winter Nelis		
Column 3 Total		
Total Number Ordered		

$ Total Sticks @ $5.00 ea.	$
$ Total Feet @ $4.50/ft (Minimum 10 feet per variety)	$

Scionwood sticks are around 8" long with a 1/4" caliper when possible. $5.00/stick.

For larger quantities, order by the foot for $4.50/foot. (10' minimum per variety)

ROOTSTOCK – Bundle of 10

Rootstock is approximately 1/4" caliper.

See page 39 for descriptions.

Rootstock	Price	Qty	$Total
249-B Malus Antonovka	$30.75		
250-B M. Budagovsky 118	$30.75		
251-B M. M111	$30.75		
252-B M. Geneva 11	$33.50		
253-B M. Budagovsky 9	$30.75		
254-B Prunus americana	$33.50		
255-B Prunus avium	$30.75		
256-B P. cerasifera	$30.75		
257-B Pyrus OHxF97	$30.75		
Bundles Ordered			

Scionwood for Grafting

- Deadline for ordering scionwood is February 18, 2022.
- Scionwood will be shipped to you around March 14.

The variety list is on the facing order form. Variety descriptions are on our website. Scionwood is shipped only in March. Rootstock can be sent with your scionwood order in March if you select that option. We sell scionwood in two ways:

By the stick: One 8" stick ($5 each) will graft 3 or 4 trees.

By the foot: For orchardists grafting large numbers of trees of a particular variety, we also offer scionwood by the foot ($4.50/foot, minimum order of 10 feet). In our own nursery work, we are usually able to graft 6–8 trees from one foot of scionwood.

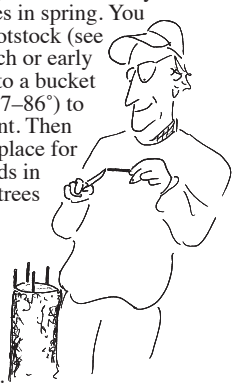
Storage: You can graft right away or store scionwood for later use. It will keep quite well for several weeks in the fridge or in a cold dark basement, root cellar or shed. Storing scionwood at freezing temps can be okay (we have friends who stick theirs in a snow bank), but the very cold temperatures in a freezer will kill it. It will also die if it dries out or is stored without special protection from ripening veggies or fruits. We recommend triple plastic bagging your scionwood. There is no need to dampen the scionwood or to insert wet paper towels before bagging it.

What does a person do with scionwood?

Scions are twigs. They have no roots and will not grow if you plant them. They are cuttings from dormant branch tips, intended for spring grafting.

Is grafting easy? Yes, once you get the hang of it. Experienced grafters often have 100% "take" with their grafting. Beginners often have less. While you can learn to graft from a book or video, we highly recommend the old-fashioned way: find a real person to teach you. MOFGA and other organizations have grafting classes every spring. Find one near you!

There are two general ways to graft fruit trees in spring. You can **bench graft** by grafting scionwood onto rootstock (see right). Generally we do this indoors in late March or early April. We keep the little grafted trees packed into a bucket of damp sawdust in a warm spot in the house (77–86°) to break dormancy and promote callus development. Then we harden them off in a cold (but not freezing) place for a week or two before planting out in nursery beds in mid-to-late May. In a couple of years when the trees are 3–4' tall, we plant them in the orchard.



You can also **topwork** scionwood onto established trees. We do our topworking after the trees have begun to show some green growth and the bark slips from the wood when cut, usually about May 10 in central Maine.

We offer grafting supplies in our Seeds & Supplies catalog or online: **fedcoseeds.com/ogs**.

Scionwood Collection at Fedco

Scionwood season at Fedco is a truly hopeful time. Every tiny dormant bud on each stick we ship out has the potential to become a new grafted fruit-bearing tree. In winter we collect more than 20,000 feet of scionwood from up to 250 varieties of apples, pears and plums! In 2020 we shipped out close to 10,000 feet of scions to customers across the country: first-time grafters, orchardists, apple collectors and cidermakers alike. The rest is distributed to our local growers to propagate most of the fruit trees found in this catalog.

During the frigid days of January and February, scionwood collection is in full swing. We bundle, label and seal it all in bags to store in our cold warehouse. In March we measure, snip and label the scions for shipping. As John Bunker often says, we are passing the baton.

There is no single Fedco Orchard. Over many years John has built friendly relationships and collaborated with orchards around Maine. In exchange for the ability to collect this valuable resource, he would offer some time grafting in the spring, pruning in the winter, or perhaps trade some trees from the Fedco inventory. A win-win for all.

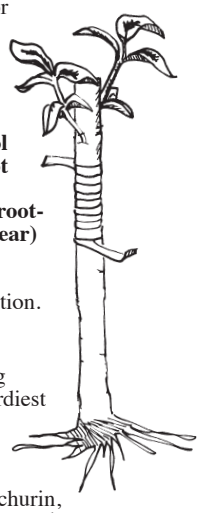
We have also sourced some of our rare and difficult-to-find varieties from out-of-state orchards. For instance, Poverty Lane Orchards in NH, home of Farnum Hill Ciders, was one of the first in the Northeast to grow many of the now popular European cider apple varieties. For years they shared generously with us while we built up our own scion banks. We continue to collect rare and important varieties and graft them into our own orchards to ensure access in the future and to localize and streamline our winter scion collection.

The Scionwood Exchange and grafting workshop

The annual Scionwood Exchange and Seed Swap is held in March at MOFGA. (Check for updates at mofga.org.) Due to pandemic restrictions last year, there were remote workshops and scionwood pickup locations around the state. We hope to be back in person for this spring tradition, but who freaking knows.

Hardy Rootstocks for Grafting

We consider these to be some of the best rootstocks for home or commercial use. Even without grafting, any of these produces fruit suitable for wildlife. For rootstocks not listed, or for larger calipers or larger quantities, please contact us for information.



Please note! We do our best to provide 1/4" caliper stock. Because of factors beyond our control (such as weather!) stock may be 3/16–3/8". We cannot guarantee scion or rootstock diameter.

Because of the way they are propagated, clonal rootstocks (B118, M111, G11, B9 apples and OHxF97 pear) rarely come with more than a few roots.

You can receive your rootstock sooner—shipped around March 14—if you select the early shipment option. Otherwise, your rootstock will be shipped during our regular schedule later in March or April.

***Malus* 'Antonovka'** (Apple) Hardy Russian seedling rootstock for full-sized "standard" apple trees. The hardiest rootstock we offer. Space trees 20–30' apart. Z3.

***249A** Malus Antonovka, bundle of 10, $30.75*

***Malus* 'Budagovsky 118'** (Apple) [Moscow Pear x (M8 and M9 pollen)] Michurinsk College of Ag, Michurin, Russia. Also called **Bud 118** or **B118**. Semi-dwarf rootstock, about 85–90% of standard. Sometimes referred to as a "semi-standard" or even a standard. Space trees 20–25' apart. More productive and precocious (fruits at a young age) than trees on Antonovka. Very winter hardy and soil adaptable. Generally not used in commercial orchards due to its large size. Note that reddish cambium does not scrape green like other rootstocks. Resistant to collar rot. Unknown susceptibility to fireblight. Z3.

***250A** Malus Budagovsky 118, bundle of 10, $30.75*

***Malus* 'M111'** (Apple) [Northern Spy x Merton 793 (Northern Spy x East Malling11)] Collaborative intro of East Malling Research Stn and the John Innes Institute, Merton, England, about 1950. Technically named MM111, the MM refers to Malling and Merton. Very popular semi-dwarf rootstock produces a tree about 65–80% of standard. Space trees 15–20' apart. No staking necessary. Slightly more precocious than standards. Well anchored and adaptable to a wide range of soils. Resistant to woolly aphid. Not nearly as long-lived as standards. Hardy to Z4, maybe Z3.

***251A** Malus M111, bundle of 10, $30.75*

***Malus* 'Geneva 11'** (Apple) Also called **G11**. Cornell U intro, NY. Dwarf rootstock produces a tree about a third the size of standard, about halfway between M9 and M26 (a bit larger than Bud 9). Space trees 8–10' apart. Suckers only slightly. Moderately susceptible to woolly aphid. Excellent fireblight resistance. Requires staking, weeding and watering in most locations. Z4/5.

***252A** Malus Geneva 11, bundle of 10, $33.50*

***Malus* 'Budagovsky 9'** (Apple) [M8 x Red Standard (Krasnij Standart)] Also called **Red-leafed Paradise** or **Bud 9**. Michurinsk College of Ag, Michurin, Russia, 1946. Dwarfing rootstock, produces a tree about a quarter the size of a standard tree. Highly productive and precocious with large fruit size. Very hardy though not as hardy as Antonovka. In most locations, requires weeding, mulching, staking and irrigation. Space trees 5–10' apart. Note that reddish cambium does not scrape green like other rootstocks. Some resistance to fireblight. Z4.

***253A** Malus Budagovsky 9, bundle of 10, $30.75*

Prunus americana (Plum) Seedling rootstock for American, Japanese or hybrid plums. Also recommended for grafting peaches. Seedling plum produces very decent 1" fruit without grafting. The best pollinator for hybrid plums. (See explanation in plum section on page 22.)

***254A** Prunus americana, bundle of 10, $33.50*

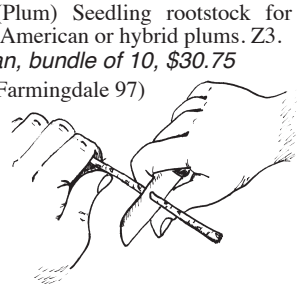
***Prunus avium* 'Mazzard'** (Cherry) The rootstock we use for grafting sweet and pie cherries. Shallow spreading root system. Longer lived than Mahaleb though not as hardy. Does not do well in heavy poorly drained soils. Z4, sometimes Z3.

***255A** Prunus avium Mazzard, bundle of 10, $30.75*

***Prunus cerasifera* 'Myrobalan'** (Plum) Seedling rootstock for European plums. Not recommended for American or hybrid plums. Z3.

***256A** Prunus cerasifera Myrobalan, bundle of 10, $30.75*

***Pyrus* 'OHxF97'** (Pear) (Old Home x Farmingdale 97) Produces a vigorous hardy well-rooted almost-standard-sized tree. Superior to *Pyrus communis* in numerous ways, and can be used for both European and Asian pears. We use "97s" for our Fedco catalog offerings. Z3/4.

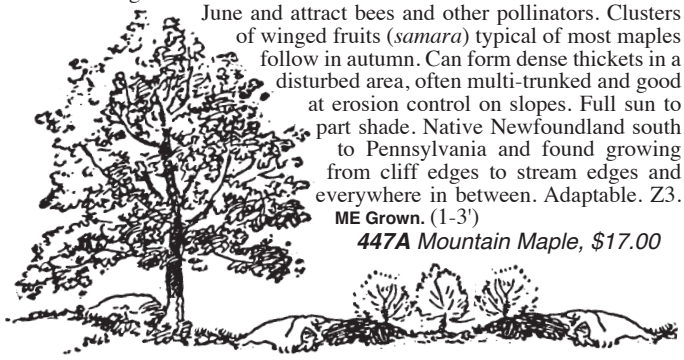


***257A** Pyrus OHxF97, bundle of 10, $30.75*

Small Trees and Shrubs

As Green's Nursery catalog from 1904 explains, "There are many trees that by pruning can be made to resemble shrubs, and many shrubs that by different pruning may be made to produce medium-sized trees."

***Acer spicatum* Mountain Maple** 10-20' x 10-15' Small bushy understory tree with a presence across the state of Maine. Yellowish-green three-lobed leaves turns orange to bright-red in the fall and somewhat resemble those of striped maple (*A. pensylvanicum*) but more deeply veined with coarse teeth. *Spicatum* refers to the long spike-like yellow or sometimes greenish-white flower clusters that form above the leaves in June and attract bees and other pollinators. Clusters of winged fruits (*samara*) typical of most maples follow in autumn. Can form dense thickets in a disturbed area, often multi-trunked and good at erosion control on slopes. Full sun to part shade. Native Newfoundland south to Pennsylvania and found growing from cliff edges to stream edges and everywhere in between. Adaptable. Z3. **ME Grown.** (1-3')



***447A** Mountain Maple, $17.00*

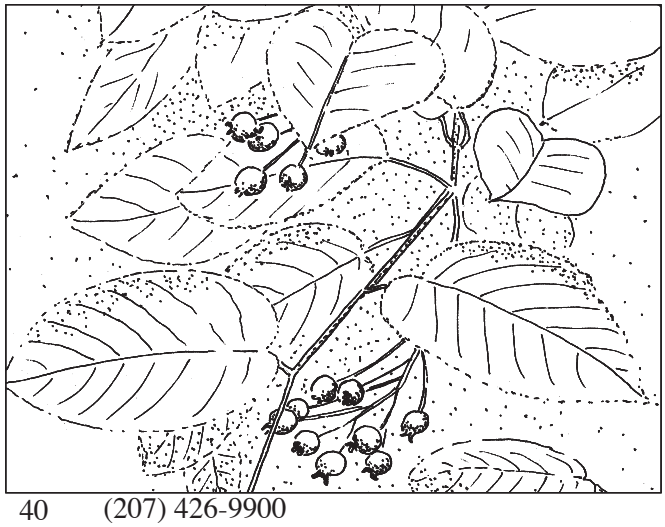
Amelanchier Also called **Juneberry**, **Parsonberry**, **Serviceberry**, **Saskatoon**, **Shadblow**, **Shadbush** and **Shad**. Folks downeast call it Wild Pear. Very hardy genus of spring-flowering shrubs and small trees with edible berries. Beautiful fragrant 5-petaled white flowers are early harbingers of spring in Maine. Purplish-black sweet berries good in pies, cobblers, jellies, jams, smoothies and cakes. Berries are about the size of a lowbush blueberry, or a bit larger, and seedier. Popular with wildlife. Nice red-orange fall color. Thrives along stream beds as well as on rocky slopes. Tolerates partial shade, salt, pollution and wet spots but not standing water. Considered to be self-fruitful but we recommend planting with other Amelanchiers to ensure pollination. Taxonomy of Amelanchiers are a point of confusion in the nursery trade where common names and even botanical names are used interchangeably. Furthermore, these plants easily hybridize with each other in nature. Below, we've highlighted salient features of each species. (1-3')

***A. alnifolia* 'Regent' Juneberry** 4-6' x same. J. Candrian intro, Faribault, MN, 1997. An open-pollinated seedling originating near Regent, ND. Compact prolific shrub with sweet purple-magenta berries. Fruit ripens in mid-July in central Maine. Plant in well-drained fertile soil and full sun. Foliage somewhat susceptible to leaf spot or rust but this doesn't affect fruit. Native to northwestern North America. Z2.

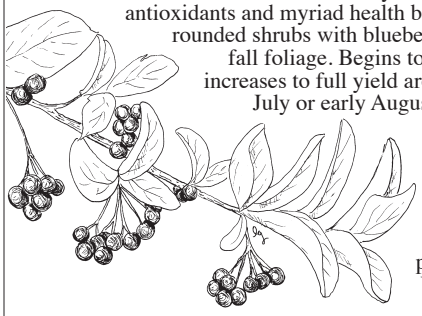
***448A** Regent Juneberry, $16.50*

***A. laevis* Allegheny Serviceberry** 15-25' The most common Amelanchier in Maine. The unique purplish-orange bronzed color of the unfolding leaves on this understory tree is a favorite spring sight. Pendulous white blossoms precede the young leaves and are followed by berries that ripen in midsummer. Referred to as Shad or Shadbush by old-timers because the blossoms coincide with the spring shad run in certain Maine streams. Likes well-drained acid soils along the edge of fields, streams and roads. Native Midwest to eastern U.S. and Canada. Z2. **ME Grown. Indigenous Royalties.**

***449A** Allegheny Serviceberry, $16.50*



***Aronia* spp. Chokeberry** Aronia has gotten a lot of press in recent years as a superfruit: it has wonderful medicinal qualities, works well in a range of culinary applications and is an important wildlife plant in the native landscape. Both red (*A. arbutifolia*) and black (*A. melanocarpa*) chokeberries are edible when cooked, but we emphasize the red for wildlife, while the black may be a better choice for medicine and food. Black chokeberries are commercially cultivated for their high levels of antioxidants and myriad health benefits. Both species are small rounded shrubs with blueberry-sized fruit and electric-red fall foliage. Begins to bear fruit in its third year and increases to full yield around five years. Ripens in late July or early August. If not harvested, the berries will hang on the bushes until songbirds eat them in late winter. Will form colonies. Not particularly picky about where it grows: adaptable to moist or dry areas, sun or partial shade. Native to eastern U.S. **Self-fruitful.** Z3/4. (1-3')



***A. arbutifolia* 'Brilliantissima'** 6-8' x 3-4' In *The Best of the Hardiest*, John Sabuco calls red chokeberry "one of our finest native landscape shrubs." Upright multi-stemmed form. Dense clusters of small white flowers with red stamens. Birds love the abundant persistent glossy bright red fruit. With "brilliant" fall foliage, this plant is the best alternative to the invasive burning bush. **ME Grown.**

***450A** Brilliantissima Red Chokeberry, $16.00*

***A. a.* Red Chokeberry Seedlings** 6-10' x 3-6' Each one is genetically unique. Beautiful in mass plantings and borders. Plant several in a hedge and make the birds happy! **ME Grown.**

***451A** Red Chokeberry Seedling, $16.00*
***451B** Red Chokeberry Seedlings, bundle of 5, $68.00*

***A. melanocarpa* 'Viking'** 4-6' x same. Introduced in Sweden. Upright vigorous high-yielding shrub produces very large dark tasty berries.

***453A** Viking Black Chokeberry, $16.00*

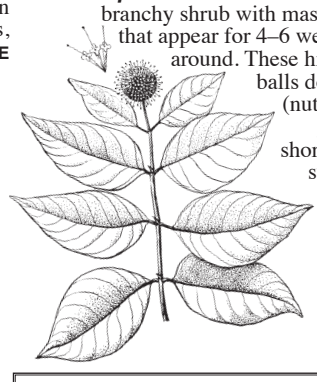
***A. m.* Black Chokeberry Seedlings** 3-6' x same. Each one is genetically unique. Plant several for an attractive edible hedge. **ME Grown.**

***454A** Black Chokeberry Seedling, $16.00*
***454B** Black Chokeberry Seedlings, bundle of 5, $68.00*

***Calycanthus floridus* Carolina Allspice** 6-10' x 6-12' Beautiful aromatic native shrub with unique 1" dark maroon flowers blooms as it breaks dormancy in April and May and continues flowering sporadically through the summer. Upright flowers resemble small magnolias with petals spiraling into similar-looking sepals, a characteristic of many primitive plants. Highly fragrant blooms reminiscent of pineapples and bananas. Dirr considers it one of the great treasures of eastern North America, especially when allowed to grow into a large open specimen. Flowers on new wood so best pruned in summer. Partial sun and moist rich soil. Native to stream edges and woodlands of southeastern U.S. Z5. (1-3')

***457A** Carolina Allspice, $16.50*

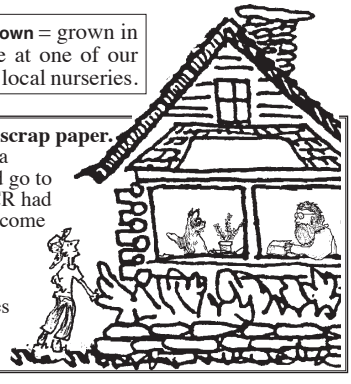
***Cephalanthus occidentalis* Buttonbush** 6-10' x 8' Loose rounded branchy shrub with masses of unusual spherical fragrant white flowers that appear for 4–6 weeks in summer—a magnet for every honeybee around. These highly ornamental blooms the size of ping-pong balls do well in dried flower arrangements. The seeds (nutlets) make good duck fodder in the fall. Bright green foliage. Often found in masses along the shores of New England's rivers and ponds but also suitable for well-drained soil. Recommended in hedges for naturalizing. Native from eastern U.S. to New Mexico. Z4. **ME Grown.** (1-3')



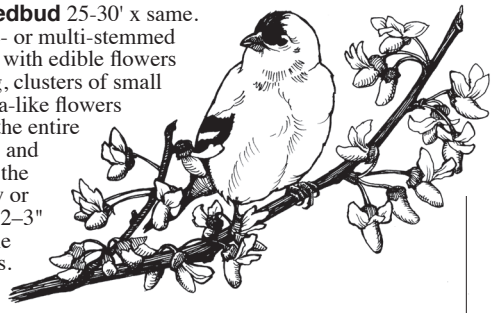
***458A** Buttonbush, $16.25*

ME Grown = grown in Maine at one of our small local nurseries.

1994: A couple of hippies winging it with scrap paper.
Bunk: The Fedco office was established in a Waterville apartment. Before this… I would go to Canaan one afternoon each August where CR had a rustic cabin and large gardens. CR would come in from his garden, often dressed it nothing more than a pair of shorts. We would sit in the cabin, sometimes by kerosene lamp and hammer out the budget on a couple of pieces of scrap paper. Then I'd drive home, often well after dark.



***Cercis canadensis* Redbud** 25-30' x same. Small vase-shaped single- or multi-stemmed tree is highly ornamental with edible flowers and seeds. In early spring, clusters of small brilliant purplish-pink pea-like flowers are so abundant they fill the entire tree, dotting the branches and even coming right out of the trunk. Flowers edible raw or cooked. Flat leguminous 2–3" pods have roastable edible seeds high in antioxidants. Nitrogen-fixing tree is also valuable as an early-season nectar plant for bees. Large heart-shaped leaves emerge opaque pink, mature to deep green and turn yellow in fall. Smooth dark bark becomes plated and brick-red with purple undertones. Sun or partial shade, soil adaptable. Fine as a specimen tree or in groups. Native to central and eastern U.S. and may not reach full maturity size in northern areas. Very tender and only marginally hardy in Zone 5. **ME Grown.** (1-3')



***459A** Redbud, $18.25*

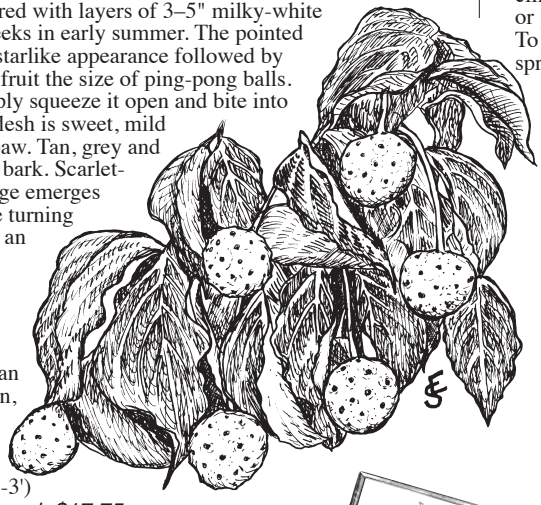
***Clethra alnifolia* 'Ruby Spice' Summersweet** 4-5' x same. Sport of 'Pink Spires', Broken Arrow Nursery, Hamden, CT, 1992. Also known as **Sweet Pepperbush**. Red buds and beautiful spires of heavenly scented deep-pink flowers appear on racemes for six weeks in midsummer. Bees and butterflies love it. Whorls of extremely attractive finely serrated distinctly veined glossy dark green foliage turn deep gold in fall. Dangling racemes of "black peppercorns" persist into the next growing season. Erect oval habit, often suckering to form dense colonies. Slow growing. Prefers acid moist well-drained soils. A good shrub to border streams and ponds. Will tolerate salty coastal conditions. Full sun to shade. Easy to grow. Species native Maine to Florida. Z3. (1-3')

***460A** Ruby Spice Summersweet, $17.75*

***Cornus alternifolia* Pagoda Dogwood** 20' x 30-35' Also known as **Alternate-Leaved Dogwood**. Small tree or large multi-stemmed shrub, particularly beautiful with its tiers of horizontal branches and fragrant white 2–3" flower clusters. These appear in mid-late spring followed by immature olive-green berries, each tipped with a tiny bright yellow style remnant. In midsummer clusters of dark blue berries ripen above the blue-green foliage. One of the most popular dogwoods with the birds. Roots, bark and inner bark all medicinal. Prefers partial shade and moist well-drained acid soil, but tolerates full sun, poor soil and even clay. pH adaptable. Excellent naturalized as a specimen or in groups. Reddish-purple fall color. Susceptible to golden canker: when dormant, prune out diseased branches to prevent spores spreading to the trunk. Native to eastern U.S. Z3. (1-3')

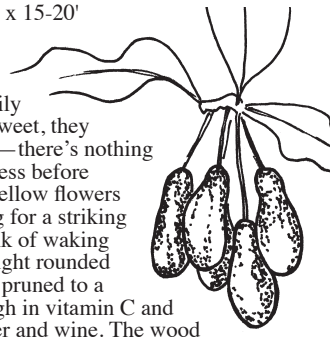
***461A** Pagoda Dogwood, $17.50*
***461B** Pagoda Dogwood, bundle of 5, $74.50*

***C. kousa* var. *chinensis* Kousa Dogwood Seedling** 20-30' x same. Also referred to as **Chinese Dogwood**. Introduced by EH Wilson, Hubei, China, 1907. Horizontally spreading small specimen tree or large shrub covered with layers of 3–5" milky-white blossoms for up to 6 weeks in early summer. The pointed bracts give blossoms a starlike appearance followed by deep pink edible exotic fruit the size of ping-pong balls. Peel off the skin or simply squeeze it open and bite into the custardy pulp. The flesh is sweet, mild and reminds us of pawpaw. Tan, grey and faint orange exfoliating bark. Scarlet-orange-yellow fall foliage emerges maroon in spring before turning green. Used up north as an alternative to the iconic southern dogwood tree, *C. florida*. Resistant to dogwood anthracnose and borer. Prefers light well-drained soils with an abundance of air and sun, but it'll tolerate shade and damper areas. Very adaptable. Native to China and Japan. Z4. (1-3')



***462A** Kousa Dogwood, $17.75*

***C. mas* Cornelian Cherry** 20-25' x 15-20' The fruits of this Old World gem, harvested by humans for thousands of years, are delicious bright red pear-shaped "cherries" that set heavily in late summer. Dense, chewy and sweet, they deliver a distinctive toothsome tang—there's nothing like it. Let them ripen to full sweetness before picking. Clusters of small delicate yellow flowers cover the leafless tree in early spring for a striking show before the forsythias even think of waking up. Long-lived large shrub with upright rounded habit makes a great hedge or can be pruned to a small tree. Nutritious, medicinal, high in vitamin C and good in jam, syrup, tarts, fruit leather and wine. The wood is hard and strong, once used for spears and wheel spokes. Prefers well-drained soil and full sun but otherwise adaptable. Likely to bear fruit in 2–3 years. **Partially self-fertile**—plant multiples to improve yields. Native to Europe and Asia. Z4/5.



***C. m.* 'Elegant'** Bred by Svetlana Klimenko, a Ukranian botanist at the Central Botanic Garden in Kiev. Selected for good fresh-eating flavor. Ripens around the third week of August in Maine. Picking window lasts between two and three weeks. Fruits are about 1 1/4" long with a very slender elongated shape. Soft flesh is tricky to pit so best eaten out of hand. **ME Grown.** (2-5')

***463A** Elegant Cornelian Cherry, $30.00*

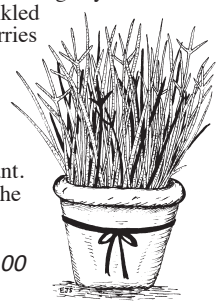
***C. m.* 'Pioneer'** Another Klimenko intro with good flavor. More tart than Elegant but better for processing. Ripens around the first week of September in Maine, about one week after Elegant. Picking window lasts for three or four weeks. Fruits mature to about 1 1/2" long and have a pronounced fat pear shape. Firm flesh is easy to pit. **ME Grown.** (2-5')

***464A** Pioneer Cornelian Cherry, $30.00*

***C. m.* Cornelian Cherry Seedling** Each one will be unique. Plant several for genetic diversity. They will pollinate each other and any named cornelian cherry cultivar. **ME Grown.** (1-3')

***465A** Cornelian Cherry Seedling, $17.00*

***C. sericea* Redosier Dogwood** 8-10' Formerly called *C. stolonifera*. Bright red stems are a favorite sight from late fall through early spring, before the foliage emerges. Broad loosely rounded multi-stemmed shrub spreads freely by stolons (underground stems) and forms excellent hedges and borders. Most admirable in the winter when the masses of brilliant stems contrast a backdrop of freshly fallen snow. Bring them inside and enjoy them for wreaths, arrangements and basket-weaving. By June, the stems are hidden by dark green foliage and sprinkled with tiny 4-petaled star-shaped flowers. Whitish berries in 2–3" clusters are popular with dozens of bird species. One of the most valuable of our native wildlife plants. Perfect for swamps, streams and wetlands. Very adaptable to a range of soils and climates, but generally likes wet conditions. Sun or partial shade. Fast growing and easy to transplant. To improve stem color, prune out older stems in the spring. Native to eastern U.S. Z2. (1-3')



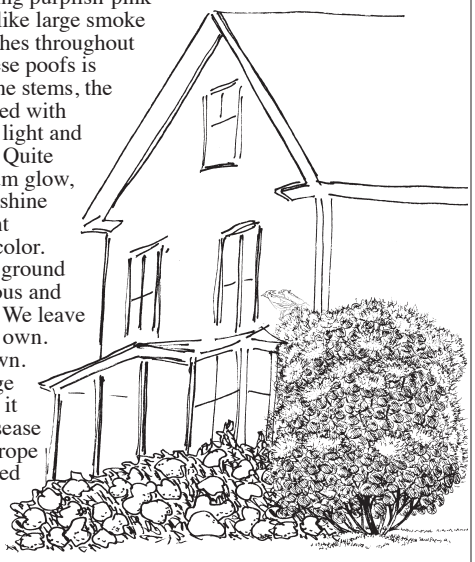
***466A** Redosier Dogwood, $15.75*
***466B** Redosier Dogwood, bundle of 5, $64.50*

Pollination clarification

Self-pollinating, **self-fertile** and **self-fruitful** all mean the same thing. You can plant a self-fertile tree and expect it to pollinate itself and set fruit alone (for example, peaches, pie cherries, apricots). However, many self-fertile trees' fruit sets are enhanced with multiple plantings (elderberries and *Amelanchiers*). **Self-sterile** or **self-infertile** means that another tree of a different cultivar or variety is needed to set fruit (cross-pollinate). This is the case with most apples. **Monoecious** (from Greek meaning 'one household') plants have their female and male parts on separate flowers both together on the same plant. In most cases, these plants are self-fertile, but not always! (Black walnuts are monoecious but the male flower releases pollen before the female flowers open, so having two plants is better than one). **Dioecious** ('two households') plants have either all male or all female flowers on separate individuals. You would need to plant one female and one male to achieve pollination. When you buy unsexed seedlings, you generally have a 50-50 chance of getting one sex or the other (spicebush and bayberry). **Bisexual** or **perfect** flowers contain both male and female components within the same flower. Some plants with perfect flowers will be self-fertile, some will not. Often, specific cultivars or varieties have perfect flowers but they cannot pollinate themselves and need other varieties to do it for them (apples and blueberries).

1995: Eat at Fedco!
Bunk: At Gene's suggestion we created first Trees magazine-format catalog. Our first cover was my drawing, "Eat At Fedco!" The "half-size" catalog dimensions were 8 1/2 x 7", 32 pages and 197 items.

***Cotinus coggygria* 'Royal Purple' Smokebush** 8-10' x same. Boskoop, Netherlands. Upright spreading shrub with velvety dark purple foliage and amazing purplish-pink inflorescences that look like large smoke puffs on top of the branches throughout summer. Each one of these poofs is composed of a web of fine stems, the smallest of which are lined with tiny hairs that reflect the light and create an ethereal effect. Quite remarkable. For maximum glow, plant where the sun will shine through each luminescent leaf. Red-burgundy fall color. Some say to cut it to the ground each fall for more vigorous and brightly colored growth. We leave ours to come back on its own. So far it hasn't let us down. Adaptable to a wide range of pH and soils although it prefers well-drained. Disease free. Native southern Europe to China. Often considered a Zone 5 plant, but reliably grows back and flowers each summer in Zone 4. (1-3')

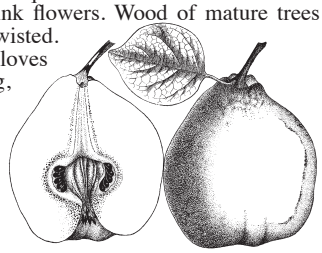


***467A** Royal Purple Smokebush, $18.50*

***C. obovatus* American Smoketree** 20-30' x same. Also called **Smoke Tree** and **Chittamwood**. Rare and exquisite. (Not to be confused with Smokebush, *C. coggygria*.) Large oval leaves emerge yellow, orange, amber, red and purple, are upright and filter the sun like stained glass. They relax and turn bluish-green as they mature, then put on another color show in fall. Bears 6–10" panicles of tiny yellow-green flowers in early June. As they fade, fuzzy light pink "hairs" emerge and persist all summer, giving the tree a hazy smoky misty quality. These plumes are more subtle than the non-native Smokebush, but the foliage is the real eye-catcher here. Finches love the seeds. Scaly interesting bark. Thought to be a relic tree from 25 million years ago, it almost went extinct during the mid-19th c. when the wood was over-harvested for fence posts, tool handles and orange fabric dye. Allow it to grow several trunks or prune to a single specimen. Tolerates most soils but prefers well-drained infertile ground. Full sun to partial shade. Native to North America. Z4. **ME Grown.** (1-3')

***468A** American Smoketree, $18.50*

***Cydonia oblonga* Quince** 10-25' A small tree with large aromatic tan or yellowish fruit shaped like a cross between a pear and an apple. The aroma is so intoxicating just having a bowl of the ripe fruit in your house will distract you from getting around to cooking them! Oblong furrowed pear-shaped fruit with golden-yellow skin and mild light yellow flesh. Usually eaten in stews and preserves. Makes a fragrant orangey-pink jelly—unlike anything we've tasted. Sometimes added to hard cider. At one time, every Maine dooryard had a quince. Cultivated for millennia in faraway lands. Large white to pink flowers. Wood of mature trees becomes impressively gnarled and twisted. We asked Aktan Askin what he most loves about quince: "I love the sound a big, fully ripe quince makes as it falls off the tree and hits the ground. So solid. So invincible. Thunk! But that aside, I really just love eating fresh quince with a spoon. Carving little balls out and chewing to juice them in my mouth."



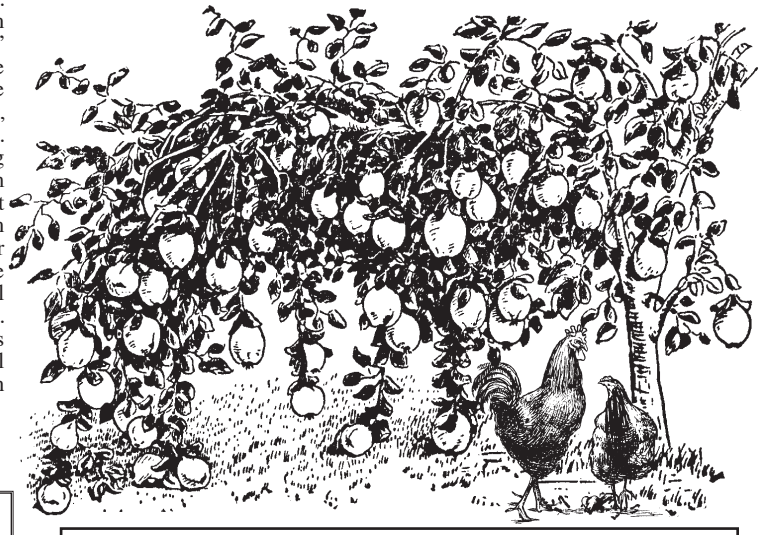
Similar soil requirements to other fruit trees. Plant in full sun and space 15–20' apart. Prune like an apple tree. Needs protection from apple borers (see page 69). Susceptible to fireblight. Ripens in October in central Maine; may not ripen in coldest areas. Not to be confused with Flowering Quince, the ornamental shrub *Chaenomeles*, which has smaller fruit. **Self-fruitful but planting more than one will give better yields.** Native to Asia. Z4/5. (3-6')

***C. o.* 'Aromatnaya'** A very hardy Russian variety, maybe the hardiest of them all. Selected for its pineapple-like flavor notes and resistance to disease.

***469A** Aromatnaya Quince, $33.75*

***C. o.* 'Smyrna'** Brought from Smyrna, Turkey, by Californian GC Roeding, whose father Fred brought the famous Smyrna fig to the U.S. Selected for excellent flavor and good keeping quality.

***470A** Smyrna Quince, $33.75*



1996: Scrap paper for miles.

Bunk: Our second magazine-style catalog—I selected the cover to be distinctively different from the previous year. I wanted customers to never be confused about which catalog they were flipping through. For our catalog production, we used a computer program called Ready, Set, Go! [which we used until 2019.] We created a set of originals using photocopies of the graphics we cut to size with scissors and attached to the text with a waxer and a rudimentary light table. Gene and I took turns carrying piles of books down to SBS Carbon Copy in Waterville. We would spend hours photocopying all the graphics we thought we'd need in an assortment of sizes, often more than a half dozen different sizes of each image. The hope was that one would fit the space we'd allotted for it. At the end of catalog season, we'd have piles of unused images on enough scrap paper to last for months.

Pruning Flowering Shrubs

• **Summer-Flowering Shrubs** should be pruned in late winter or early spring, before the new wood begins to grow. These shrubs blossom on the new wood they produce in the spring.

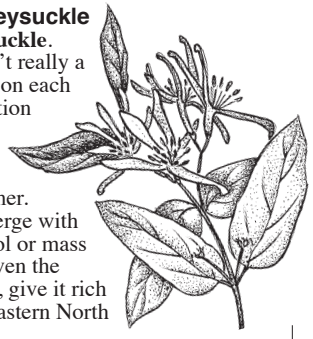
• **Spring-Flowering Shrubs** form flower buds in the summer, after they are finished blooming. Prune them immediately after their bloom is over. If you wait and prune them in the winter or following spring, you will likely remove many flowering buds.

• A common error is to prune or shear shrubs straight across the top. This encourages top-growth and the lower part of the shrub becomes woody and unsightly with less foliage. Proper pruning promotes growth at the base of the shrub.

• Observe your plants and see what they need. Some trees and shrubs benefit from aggressive pruning each year and might even respond well to being cut all the way back to the ground; others will respond by delaying fruit or blossom. Some plants thrive with little or no pruning.

• Overgrown shrubs with little foliage near the base may be rejuvenated by cutting canes down to the ground in early March, even though early blooms may be sacrificed that year. They will send forth new shoots in late spring and will be bushy with foliage clear to the ground. Pinch off tops when the desired height is attained. It usually takes two to three years to rejuvenate shrubs and hedges completely.

***Diervilla lonicera* Northern Bush Honeysuckle** 2-4' x 2-5' Also called **Dwarf Bush Honeysuckle**. Don't be fooled by the common name: it isn't really a honeysuckle. Five little bright yellow petals on each tubular flower curl open and away, an invitation to insects, hummingbirds, butterflies and garden tourists. A favorite of the bumblebee. Clusters of flowers form in the axils of new growth. Extended-season bloomer. Long pointed lustrous dark green leaves emerge with a hint of bronze. Excellent for erosion control or mass planting. Full sun to light shade. Tolerates even the poorest soils, but if you want it to naturalize, give it rich moist soil. Pest and disease free. Native to eastern North America. Z3. (1-3')

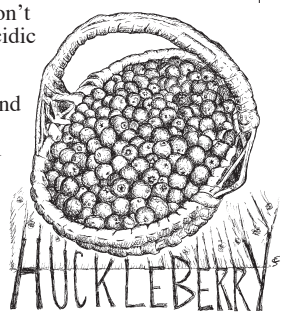


***474A** Northern Bush Honeysuckle, $16.00*

***Forsythia* x *ovata* 'Northern Gold' Forsythia** 6-8' x 5-7' Bred by Felicitas Svejda, Ottawa, Canada, 1979. One of the earliest forsythia cultivars to flower in spring. Upright form with yellow-grey branches clad in healthy rich green foliage. If your forsythia blooms only from the snow line down, you've been duped: don't buy cheap big-box forsythia. Northern Gold has not only the bud hardiness necessary for flower production above the snow line, but also outstanding golden-yellow flowers. You can have a full bloom every year! Prefers full sun and moderately fertile, slightly acid to neutral soils with good drainage. We cut our first bouquet of the year when we harvest the dormant branches for forcing inside mid-February. Bred from *F. ovata*, a hardy dependably blooming Korean species native to Asia and Europe. Z3. (1-3')

***475A** Northern Gold Forsythia, $15.50*

***Gaylussacia baccata* 'Michigan' Black Huckleberry** 1-3' x 2-4' Cousin of the blueberry, similar in form and habit but the berries are much darker and shinier—almost black—and don't have the same dusty bloom. The flavor is less acidic and more mildly sweet with the slightest crunch from tiny seeds. Use them like blueberries. Flowers in June and fruits in August. We've found many quiet little shrubs tucked in along pond edges and upland woods among the sheep laurel and the lowbush blueberries of Maine. Nectar of the pink bell-shaped blossoms helps sustain the endangered adult Karner Blue butterfly and native bumblebees. Brilliant purple-red fall foliage. Prefers sandy acidic well-drained soil but adaptable and drought tolerant once established. Full sun to part shade but fruits best in sun. Forms colonies but does so very slowly. Native to eastern U.S. and Canada. Z3/4. (1-2' transplants)

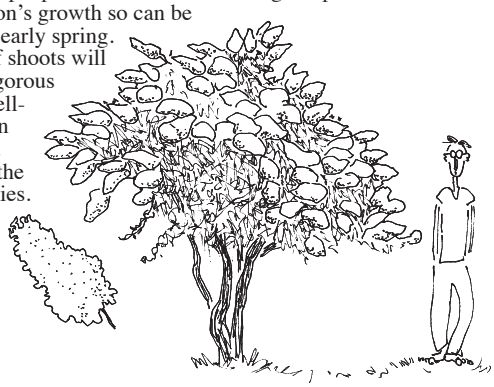


***476A** Michigan Black Huckleberry, $16.00*

***Hamamelis virginiana* Witch Hazel** 8-20' x same. A small irregular rounded fall-flowering medicinal tree or large shrub. Quirky 2/3" yellow flowers appear in early to mid-November. Oval hazel-like textured foliage turns brilliant golden-yellow in fall. Makes a soothing astringent with a seemingly endless number of uses from controlling acne to soothing diaper rash, poison ivy, chicken pox and browntail moth rashes. Most preparations involve simply brewing tea from the leaves and/or twigs. "Witch" is said to refer to the odd flowering time or maybe it's because dowsers like to use the interesting forked branches to "witch" for water. Full sun or shade. Prefers moist acid soils; avoid dry spots. No pests or diseases, does well with very little care. We do nothing to ours and it looks better and better every year. Native Canada to Georgia. Z3. (1-3')

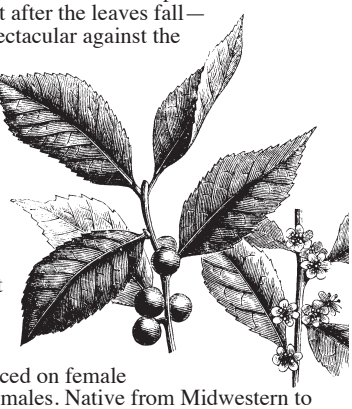
***477A** Witch Hazel, $17.25*

***Hydrangea paniculata* 'Tardiva'** 8-12' x 7-10' Upright terminal white flower panicles 6–8" long are comprised of showy sterile flowers and smaller fertile flowers. Elegant blooms July-September are fantastic fresh or dried and develop a pinkish blush with cooling temperatures. Blooms on current season's growth so can be pruned in late winter or early spring. Reducing the number of shoots will increase flower size. Vigorous plants like rich moist well-drained soil and thrive in full sun to partial shade. *H. paniculata* is one of the hardiest hydrangea species. Easy to grow. Native to Asia. Z3. (1-3')



***478A** Tardiva Hydrangea, $17.50*

***Ilex verticillata* Winterberry** Also called **Black Alder**, **Fever Bush**, **Possumhaw**, **Swamp Holly** and more. Deciduous suckering medicinal holly with clusters of upright stems. Best known for profusions of bright red 3/8" berries that stand out after the leaves fall—they keep their color all winter, spectacular against the snow. A staple of the Maine landscape, providing late-spring forage for birds. Lustrous deep green leaves retain their color long after they're cut for decoration. Richly foliated, but open enough to display interesting branch structure. Leaves used for tea and tonic, astringent bark used in herbal medicine. Tolerates dry conditions but prefers moist or wet acidic soil, even standing water. Sun or partial shade. No serious pests. **Male and female plants required for fruit**, which is produced on female plants. Plant males within 30' of females. Native from Midwestern to eastern U.S. Z4. (1-3')



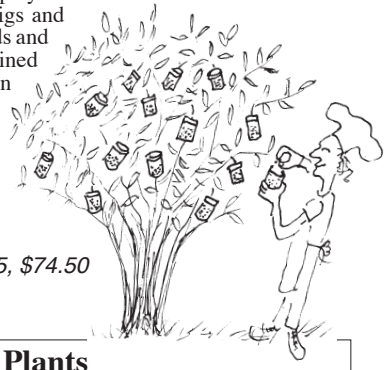
***I. v.* 'Winter Red'** 8x7' Female. Mid-sized with darker green foliage. We have a cluster of these planted right outside our window to enjoy during the cold snowy months. Berries are larger and much more prolific than wild seedlings. **Southern Gentleman male required for fruit.**

***479A** Winter Red Winterberry, $16.75*

***I. v.* 'Southern Gentleman'** 6x6' **Male selection** to pollinate Winter Red. Don't be deceived by the name—it's hardy. One will pollinate several females.

***480A** Southern Gentleman Winterberry, $16.75*

***Lindera benzoin* Spicebush** 6-12' x 8-12' Large rounded multi-stemmed native shrub suited to naturalizing in moist or wet areas, singly or in groups. Soft-yellow flowers early in spring followed by small clusters of glossy red berries by mid to late summer. Blue-green foliage turns golden yellow in fall. Edible berries and medicinal twigs and bark. Scratch the berries, foliage or stems and you'll know how it got its name: all three have a delicious lemony spicy scent and can be used as a native alternative to allspice. Leaves, twigs and fruit used in teas. Attracts bees, birds and butterflies. Prefers moist well-drained neutral or slightly acidic soils. Often found in full or partial shade, but at its showiest in full sun. These are unsexed seedlings: **male and female plants required for fruit** so plant several for best results. Native to eastern U.S. Z5. (1-3')



***481A** Spicebush, $17.50*

***481B** Spicebush, bundle of 5, $74.50*

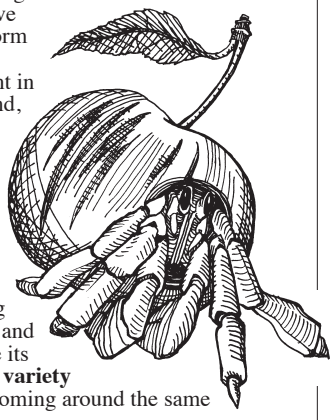
Make Space for Native Plants

We love incorporating native plants into our gardens and orchards. These plants are attractive, natural and beautifully suited to our growing conditions. They are also the best food sources for our butterflies, bees and other wildlife. Here are some you'll find in our catalog:

Amelanchier	Redosier Dogwood	Mulberry
Arnica	Echinacea	Musclewood
New England Aster	Elderberry	Nannyberry
Bayberry	American Elm	Northern Wild Raisin
Bearberry	Ferns	Oak
Bee Balm	Balsam Fir	White Pine
Birch	Geranium	Beach Plum
Blackberry	Stiff Goldenrod	Redbud
Black Cohosh	Groundnut	Carolina Rose
Black Haw	Hackberry	American Smoketree
Boneset	Hazelnut	Spicebush
Bunchberry	Hophornbeam	Spruce
Buttonbush	Huckleberry	Steeplebush
Carolina Allspice	Blue Flag Iris	Fragrant Sumac
American Chestnut	Jack-in-the-Pulpit	Sweetflag
Chokeberry	Linden	Turtlehead
Wild Columbine	Lingonberry	Blue Vervain
Prairie Coreopsis	Mountain Maple	Black Walnut
American Cranberry	Sugar Maple	Winterberry
Culver's Root	Milkweed	Wintergreen
Diervilla	Mountain Mint	Witch Hazel
Pagoda Dogwood	Mockorange	Yarrow

Flowering and Culinary Crabapples *Malus* spp.

A crabapple is any apple with fruit smaller than 2" in diameter. Crabs bear edible fruit, some more favorable for culinary use than others. Some have persistent wildlife fruit that hangs on the tree for weeks or even months. Others have hardly any fruit at all. The flowers, tree form and even the shape of the leaves can vary subtly or profoundly. Most are magnificent in bloom and are often ornamental year round, especially in winter when the leaves drop and the trees show off their interesting forms. Although crabs prefer full sun and deep well-drained soil, they are quite forgiving and will thrive in many locations with a little TLC.



Similar cultural requirements as culinary apples (see pages 69-70).

Crabapples require less formal pruning than other apples. Prune broken branches and suckers, and encourage the tree to assume its natural form. **Crabapples need a second variety for pollination,** but any apple or crab blooming around the same time within 1/4 mile will probably do.

Crabapples are grafted on M111 rootstock (see page 5). (2 1/2-5')

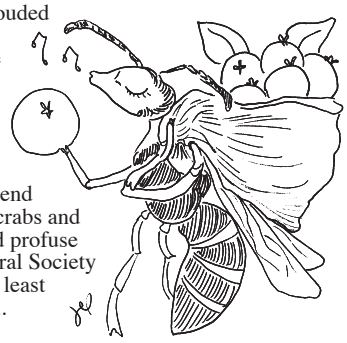
Brandywine 20x20' *M. ioensis* 'Plena' Klehm's No. 8 (*M.* x *purpurea* Lemoinei x M. Klehm's Improved) Incredibly beautiful fragrant flowers followed by unbelievably bitter fruit. Deep red buds open to small deep pink double rose-like blossoms. Put an arrangement of these flowers in a vase, and people will swear they are roses. One of the most fragrant crabs. Cidermakers love the unattractive 1–2" yellow fruit that drops in the fall and makes a mess. Very high in tannin. In *Cider Digest* some years ago, one grower wrote, "You ought to try planting a crab called 'Brandywine'. WOW!!! what a real mouth-killer as far as tannin goes… Couldn't tell you the acidity because my tongue had gone dead." Loosely rounded tree. Alternate bloomer. Blooms late. Z4. **ME Grown.**

***488C** Brandywine Crabapple on M111, $32.75*

Dolgo 25x30' From seed collected by NE Hansen of *M.* x *robusta* in 1897 at the Imperial Botanical Gardens, St. Petersburg, Russia. (*Dolgo* means 'long' in Russian.) Introduced in the U.S. in 1917. The classic culinary crab still found in old Maine dooryards. Apricot-pink buds, large fragrant 2" pure white single flowers bloom early. Beautiful purple-red 1 1/2" teardrop-shaped fruit makes flavorful clear ruby-red jelly. In recent years the aromatic sweet very acidic fruit has found favor with cidermakers. Great for canning, pickling and delicious sauce. Vigorous large blocky upright spreading tree consistently yields abundant summer crops. Very hardy. Z2. **ME Grown.**

***489C** Dolgo Crabapple on M111, $32.75*

Golden Hornet 15' x same. Origins shrouded in mystery but thought to be a chance seedling of *M. siebodii* with origins in the U.K, possibly dating back to the 1800s. Pale pink buds open to single white flowers. Plentiful yellow fruits persist into late fall and make great jelly. When not heavy with fruit, the limbs are more upright. Once loaded, the branches may bend and spread. Great pollinator for mid-late crabs and apples due to its extended bloom time and profuse annual spray of flowers. Royal Horticultural Society award winner in 1961. Everyone needs at least one yellow-fruited crab in their collection. Probably two. Z4. **ME Grown.**



***490C** Golden Hornet Crabapple on M111, $32.75*

Klehm's Improved Bechtel 20x20' *M. ionensis* x open-pollinated. A seedling of the native Prairie Crab. Large beautiful double rose-like blossoms, each with 30–35 petals edged in pink and veined in red, daub the tree's branches before leaves emerge. You will be charmed into oblivion. The 1" green fruit is so fragrant that a bowlful will scent the house for a week. Like its offspring Brandywine, the fruit is way too astringent for jelly or fresh eating but suitable for cider blends. Soft green foliage turns red in the fall. Medium-sized somewhat vase-shaped rounded tree. Among the last to bloom each spring. One of the most enchanting crabs in staffer Mike Smith's collection in Jackson. Z4. **ME Grown.**

***492C** Klehm's Improved Bechtel Crabapple on M111, $32.75*

Crabapples for cider Some ornamental crabs, like **Dolgo** and **Brandywine**, are great additions to hard cider. And some varieties we've listed with cider apples on pages 16-17 are crabapples and have special ornamental value, like **Hewe's Virginia Crab**.

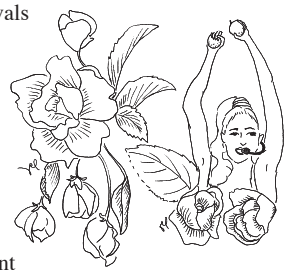
Louisa 15x15' Introduced by Polly Hill and named for her daughter. Martha's Vineyard, MA, 1962. Rose-colored buds open to cheerful single true pink fragrant flowers on an umbrella-shaped weeping form. Branches arch very slightly and then hang loosely to the ground and will sway in the breeze. Very small lemon-gold fruit with a small rose blush. Dark green foliage. One of the highlights of a visit to the Polly Hill Arboretum on the Vineyard was seeing and photographing the original tree, still surprisingly small after 60 years. Disease resistant. Z4. **ME Grown.**

***493C** Louisa Crabapple on M111, $32.75*

Lullaby 8x12' Klehm Nursery intro, South Barrington, IL, 1980. Red buds open to large single white blossoms. Another yellow-fruiting crab selected by Father John Fiala, but this one is what some call a fountain or umbrella crab. Low weeping form is reminiscent of Red Jade. We don't offer many weepers and are excited to have this one in the lineup. Fiala recommended never planting weepers in groups, an aesthetic no-no. Best as a single specimen. Extremely disease resistant. Z4. **ME Grown.**

***494C** Lullaby Crabapple on M111, $32.75*

Madonna 18-20' x 15-20' *M.* Mazam. Lake County Nursery, OH, 1987. One of the best rose types around and a favorite on our tour of Mike's collection. We thought Polar Bear and Blanche Ames were our favorite double whites, but this one rivals either. Glad to offer it again after a very long absence from our catalog. Masses of large double rose-like white blooms appear early, open slowly and remain longer than most other varieties. Makes a good pollinator for many apples given this long bloom time. Father Fiala found this seedling and described it as having the fragrance of "jasmine or gardenia." Yellowish-red fruits persist till spring. Upright scab-resistant tree. Disease-tolerant foliage. What more could you want in a crab? Z4. **ME Grown.**



***495C** Madonna Crabapple on M111, $32.75*

Sargent, Mt. Auburn strain 8-10' x 20-30' *M. sargentii*. Arnold Arboretum, 1892. If you've never seen a Sargent crab, you're in for a treat. Barely 8' tall and more than 30' wide, a delightful jumble of twists and curves—a dozen connected pretzels trying to out-pretzel each other. Densely and horizontally branched from the base with no tendency to develop a central leader, so don't force it! Pink buds and profuse pure-white fragrant single flowers seem to bloom forever. Very small dark red-purple persistent fruit. Seed collected in Hokkaido, Japan, by one of America's most famous horticulturists, CS Sargent. A species rather than a variety, many of the Sargents have been started from seed: hence the variability. This one is from the front entrance of the Mt. Auburn Cemetery in Cambridge, MA. Disease resistant. Z4. **ME Grown.**

***497C** Sargent Crabapple on M111, $32.75*

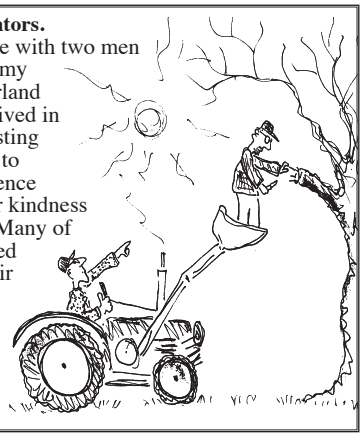
Sinai Sunset 15x12' (No. B-3) *M.* Amberina x *M.* Aloise. Fiala intro, Falconskeape, Medina, OH, 1990. Large brilliant single pinkish-purply-red flowers with golden anthers resemble the setting sun viewed from the peak of one of the more famous and spectacular locations in the world. They are that stunning. Spreading open horizontal tree habit. Reddish-green foliage. Dark red 1/2" persistent fruit. Introduced the year of Father Fiala's passing, the sunset of one of the greatest plant people to ever live. Disease free. Z4. **ME Grown.**

***498C** Sinai Sunset Crabapple on M111, $32.75*

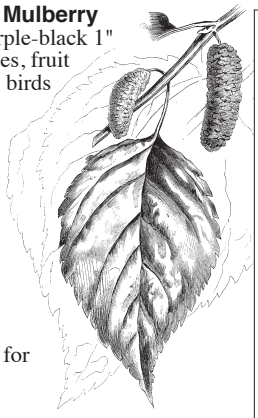
Crabapple Collection An assortment of 5 crabapples. Most will be from this year's catalog but a few rare surprises may be included. All on M111 rootstock. Trees are individually labeled. Z4. All are **ME Grown.**

***504C** Crabapple Collection, bundle of 5, $144.00*

1997-98: John meets two apple mentors.
Bunk: I began to spend a lot of time with two men who became mentors that changed my life forever. Francis Fenton and Earland Goodhue were both born in 1915, lived in central Maine, had large and interesting apple collections, and were willing to share their knowledge, their experience and their scionwood with me. Their kindness and generosity was an inspiration. Many of the varieties that eventually appeared in the Fedco catalog came from their collections. I spent many days on Earland's dairy farm in Sidney and at Francis Fenton's in Mercer. Francis' small commercial orchard practically became my second home.

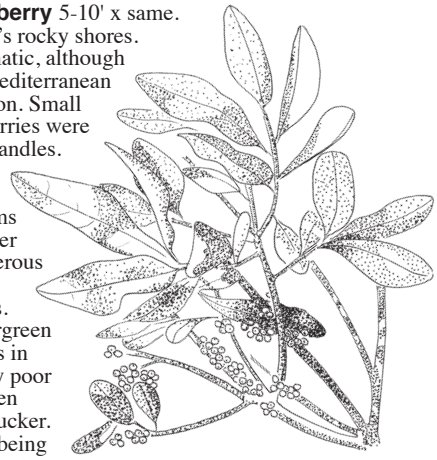


***Morus alba* x *M. rubra* 'Illinois Everbearing' Mulberry**
30x20' White County, IL, 1947. Sweet flavorful purple-black 1" blackberry-like fruit is delicious fresh, in sauces, pies, fruit leather or smoothies. What fruit you don't pick, the birds will. Great tree for viewing a huge variety of birds up close. Plant it next to the chicken pen where it will rain chicken feed into the yard for several weeks, or put down a sheet to collect the fruit as it falls. Dense round-topped tree is one of the last to leaf out in the spring and one of the first to set fruit. Ripens in early to mid-July and continues for several weeks into late summer. Fast growing, even in poor soils. Prefers moist well-drained soils but otherwise adaptable. Full sun to partial shade; withstands pollution, drought, wind and salt. **Self-fruitful** grafted cultivar, so only one plant required for fruit. Z4/5. (1-year grafts)



***507A** Illinois Everbearing Mulberry, $33.75*

***Myrica pensylvanica* Bayberry** 5-10' x same. A common sight along Maine's rocky shores. Glossy leaves are highly aromatic, although not to be confused with the Mediterranean bay leaf in your spice collection. Small greyish-blue waxy fragrant berries were historically used for making candles. Non-showy flowers appear in late spring followed by fruit production along the stems of female plants during summer into late fall. Plants feed numerous wildlife species and are especially craved by swallows. Rounded deciduous semi-evergreen very salt-tolerant shrub thrives in full sun to partial shade, sandy poor soils to heavy clay. Excellent en masse or in hedges, tends to sucker. Fixes nitrogen. Tends toward being dioecious: male and female plants required for good fruit development. Unsexed plants; **plant several if you desire berries**. Native to eastern North America. Z2. **ME Grown.** (1-3')



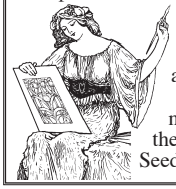
***508A** Bayberry, $15.50*
***508B** Bayberry, bundle of 5, $69.00*

***Philadelphus lewisii* 'Blizzard' Mockorange**
4-5' x 3-4' COPF intro, Alberta, Canada. Medium-sized coarse upright loosely arching ornamental blooming shrub. A "blizzard" of sweet citrusy fragrance from pure-white slightly cupped 4-petaled blossoms for up to four weeks in late spring, after the lilacs fade. A spray of golden yellow anthers attractive to bees and butterflies accents each flower. Species was named after Meriwether Lewis who noted it in 1806 during the Lewis and Clark Expedition. Prefers moist rich well-drained soils but will grow well in most conditions. Full sun to partial shade. Since blossoms form on prior year's growth, best to prune after flowering. Similar to old-fashioned European *P. coronarius*, but this species is native to North America. William Cullina calls it "our most ornamental *Philadelphus* species." Z3. (1-3')

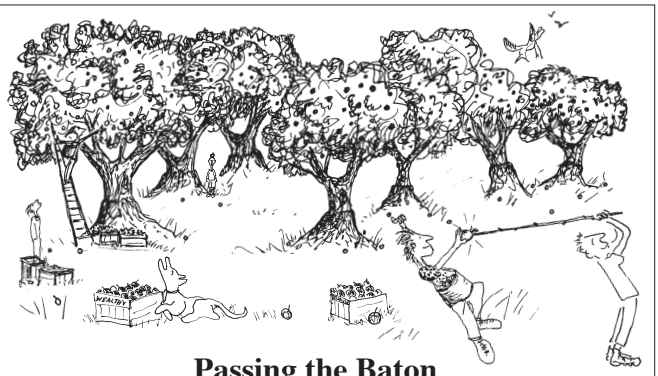
***509A** Blizzard Mockorange, $15.50*

ME Grown = grown in Maine at one of our small local nurseries.

1998: The hardiest varieties for northern growers.
Bunk: I took my first of many fruit exploring trips to Aroostook County in September '98. I wanted Fedco Trees to better serve our northern-most customers and I thought that trips to Aroostook could help make that happen. Those exciting and wonderful trips led to the discovery of apples, plums, blackberries and other plants that we have offered ever since.



The Trees catalog was becoming a test ground for new artists. Typically, they would appear once or twice in the Trees catalog and then go on to appear in the much larger Seeds catalog. The catalog grows to 48 pages.



Passing the Baton

One of my earliest memories from working at Fedco Trees is John gathering the whole crew around the table in the break room a few days before the annual spring Tree Sale. While he scooped bites from a large half of a baked squash, he gave us the chance to ask questions about apples, pears, peaches, plums or whatever else we needed to know. He wanted to make sure we were well educated about all the plants in the catalog so we could answer customer questions that arose as we sent trees flying out the doors of our old warehouse basement.

A decade later I would find myself on frequent long car rides around Maine with John to collect hundreds of feet of scionwood from orchards or to gather specimens for an apple display. Hours and hours to pick his brain, hear his stories, and absorb as much of his knowledge as I could. I consider myself very fortunate to be among the next generation of orchardists, fruit explorers, plant people and Fedco staff who were inspired and educated by John Bunker. He has helped to lay the foundation for my work grafting and growing nursery stock for Fedco, caring for my ever-expanding rare apple collection, and sourcing scionwood and selecting new varieties for Fedco Trees. Through the years John has taken many younger folks under his wing—most have gone on to do wonderful things in the fruit tree world.

Seth Yentes, Fedco's largest grower, grafts and nurses tens of thousands of fruit trees and shrubs at North Branch Farm in Monroe. Seth was a teenager when he first met John, and was just getting interested in fruit-tree propagation. While most kids were in high school, Seth spent much of the fall tagging with John on fruit-exploring missions, searching for old lost apples and pears. Seth says, "I like to think of John as one of my father figures…my apple dad. Who knows what my life would look like if John never started Fedco Trees." In addition to growing trees for Fedco, Seth has a large apple and pear orchard and runs a U-pick highbush blueberry operation.

John and his wife Cammy have hosted many apprentices at their Super Chilly Farm (SCF) in Palermo. Among the alumni is Eliza Greenman, who spent the 2011 season on the farm becoming familiar with hundreds of apple cultivars. Eliza recalls that during her time at SCF she "started to understand that in order to save biodiversity, whether fruit trees or forest trees, we have to give them a purpose." Eliza has dedicated herself to feeding livestock with appropriate apple, pear, mulberry and other fruit and nut trees. She has become an innovative "orchard geek" and fruit explorer, tracking down and propagating trees that have the potential to thrive in the silvopasture systems and orchards she designs to support livestock. (Check out her work at hogtree.com)

Abbey Deighan first met John when she took a class he co-taught at the College of the Atlantic (COA) on the history of apples in England. She went on to apprentice at SCF, her first immersion into agriculture and homesteading. Abbey recalls John and Cammy's generosity, guidance and patience while she spent hours organizing apple specimens in the root cellar, learning to build an apple ladder, picking apples for Out on a Limb CSA, and doing lots of fruit exploring. With her husband Angus, Abbey now owns and operates Rocky Ground Cider, where they make some of the best fermented cider from "wild and heirloom apples foraged from Maine's countryside." Abbey says, "John's passion for apples changed the course of my life…If all goes as planned I too will be spending the rest of my autumns driving around, searching roadsides, abandoned orchards and wild thickets for the best apples."

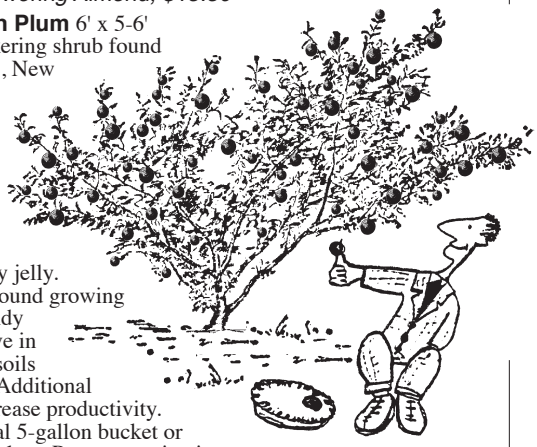
Laura Sieger also met John while she was at COA, where she developed a passion for apples. John became an important mentor to her, and as a student she interned with him for two years to learn the history of apples in Maine, the art and science of identifying heirloom apples, and much about organic orcharding. Laura and John went on many fruit-exploring excursions together, even traveling to the Asturias region of northern Spain to visit cideries and orchards. Laura now coordinates the Maine Heritage Orchard and is an accomplished orchardist, cidermaker, apple historian and educator.

We are all so grateful to John for sharing his passion for apples and trees with us. We don't know where we might be without him!

– Jacob Mentlik

***Prunus glandulosa* 'Rosea Plena' Dwarf Flowering Almond** 5-6' x 3-4' Abundant 1/2" pink double flowers in late April when little else is blooming. This arresting little shrub, an old standard in the trade, is making its second appearance in our catalog. Branches are nearly covered with the impressive blooms ranging all shades of pink and loaded with petals that look like layers of petticoats. Pointy lanceolate leaves are light green and contrast beautifully against the maroon stems of first-year wood, extending its interest into summer after the curtain closes on act one. Prune after flowering to shape and for better blooms the following year. Rich loamy soil, full sun to partial shade. May sucker and naturalize, but the one in our garden is keeping to itself. Native to China and Japan. Z4. (1-3')

***510A** Dwarf Flowering Almond, $15.50*



***P. maritima* Beach Plum** 6' x 5-6' Rounded dense suckering shrub found along ocean beaches, New Brunswick to the Carolinas. In spring beautiful showy white blooms cover the dark branches. Purplish-red 1/2–1" fruit in late summer. Excellent jams, sauces and especially jelly. Although typically found growing naturally in poor sandy soils, the plants thrive in well-drained fertile soils with a pH of 6–6.5. Additional fertilization will increase productivity. We suggest an annual 5-gallon bucket or two of compost per plant. Prune to maintain an open center for good light penetration. Plant about 5' apart. Pollination requirements are uncertain—**we recommend planting at least two for good fruiting**. Salt tolerant! Native to eastern North America. Z3. (1-3')

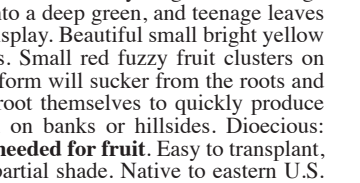
***511A** Beach Plum, $16.00*
***511B** Beach Plum, bundle of 5, $68.00*

***P. tomentosa* Nanking Cherry** 6-10' x same. Broad dense fruiting shrub, becoming open and attractively irregular. One of the earliest flowering fruits every spring. Pink buds open to masses of fragrant white 3/4" flowers. Deeply veined light green foliage with very fine fuzz (tomentum) lining each vein underneath. Excellent hedge plant: an edible landscape crop that produces a lot of fruit that actually is edible! Variable 3/4" fruit in early summer ranges in flavor from mild to tart and in color from scarlet to clear red to pink and sometimes even white. Eat fresh or frozen. Excellent jelly and fruit leather. Said to make a good pie but pitting would require quite a bit of work. Covering plants with netting will deter birds from robbing your crop. Prefers full sun in well-drained soil. **Plant two or more for pollination.** Susceptible to brown rot. Native to China and Japan. Z3. (1-3')

***512A** Nanking Cherry, $15.25*

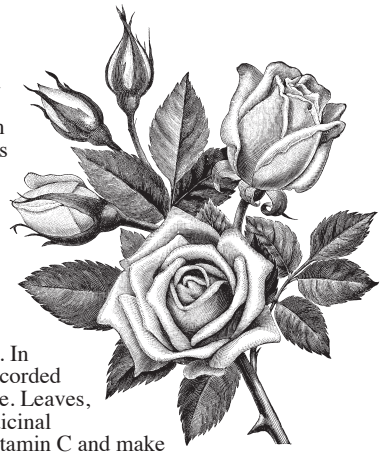
***Rhus aromatica* Fragrant Sumac** 5-6' x 6-8' Glossy blue-green trifoliate leaves emit a pleasing aroma when crushed: maybe lemony or musky but also a tad minty. Phenomenal fall colors when leaves turn orange to brilliant scarlet. Throughout summer, young leaves emerge reddish-pink, older leaves mellow into a deep green, and teenage leaves are lighter green, creating a lovely display. Beautiful small bright yellow flowers in spring draw in butterflies. Small red fuzzy fruit clusters on females attract birds. Low irregular form will sucker from the roots and branches touching the ground will root themselves to quickly produce a colony; useful in erosion control on banks or hillsides. Dioecious: these are unsexed plants; **multiples needed for fruit**. Easy to transplant, adaptable, prefers acid soil, sun to partial shade. Native to eastern U.S. Z3. (1-3')

***513A** Fragrant Sumac, $16.00*



2000: Fanciful favorites.
Bunk: This was the first year of Tree's "fanciful favorites." Seeds had been including them for some years by then. We had included a diagram with arrows and notes explaining the catalog descriptions and abbreviations, [creating] make-believe items for this purpose. Someone—perhaps CR—dubbed them "fanciful favorites." They have become an important and fun addition to every catalog since. They're sometimes written by one person but, often by a collaborative, impromptu, spontaneous group process. Sometimes customers would complain about them but, more often they enjoyed our deranged sense of humor. [See page 3 for this year's fanciful favorites.]

Rosa spp.



For millennia, roses have beguiled humans. The first cultivation of these flowers dates back more than 5000 years in China. Fossil records suggest that roses may have been around for more than 30 million years. Regarded as the ultimate icon of love, grace, beauty and elegance, roses continue to be the subject of art and poetry across the world.

Roses have long been used in medicine, food, tea and perfumery. In the first century, Pliny the Elder recorded more than 30 uses of rose medicine. Leaves, petals, hips and roots all have medicinal properties. Rose hips are rich in vitamin C and make a wonderful "rose apple" jam; rose-petal elixir calms the nerves and lifts the spirit.

Each year, we aim to offer a diverse selection of unusual and antique varieties. Unlike hybrid tea roses, these roses are all vigorous, cold hardy and on their own roots rather than grafted. The antique varieties grow slowly compared to newer hybrids and tend to be more difficult to propagate. You may notice when you receive your order that some of these roses have small root systems and little top growth. Don't be alarmed by this—it's just the nature of these old varieties. We can attest that they perform just as well as the others. If roots are tangled, cut them back to 6" or so and spread them out in the planting hole. Native to temperate regions throughout the world. (9-18")

***R. alba* 'Chloris'** 6-8' x 4-6' *R. alba* hybrid, pre-1820. Exact parentage unknown but believed to include *R. damascena*, *R. canina*, *R. corymbifera* and *R. gallica*. Thornless fragrant pale blush-pink double flowers look ruffled from afar. Outer edges of petals are slightly jagged and unfurl out of a tightly folded center. It's the hardiest thornless rose that connoisseur Bob Osborne knows. One of the main types grown for essential oil in Bulgaria for export to the perfume industry in France. Rose petals from half-opened blossoms are harvested between sunrise and 9 a.m. when the concentration of volatile oils is at its highest. Strong upright habit. Z4.

***517A** Chloris Rose, $19.50*

***R.* 'Canadian Shield'** 4-5' x 3-4' *R. floribunda* complex hybrid. Vineland Res Stn, Ontario, 2017. Recent collaboration between Vineland Research Station and the Canadian Nursery Landscape Association has led to an extremely hardy deep scarlet-red rose that has northern rose lovers talking. Mildly fragrant 3" double blooms consist of 42–52 petals per flower. Continuous flushes of blooms midsummer till frost. Deep green glossy foliage is highly resistant to black spot and powdery mildew, even late into the season. Upright form. First rose in the 49th Parallel Collection to be released after decades of breeding. Canada Blooms' 2017 Plant of the Year. Z3.

***518A** Canadian Shield Rose, $19.50*

***R. carolina* Carolina Rose** 2-4' x 5-10' Sometimes called **Pasture Rose**. Our native eastern species found in every state east of the Great Plains. Single light pink 5-petaled flowers emerge May-June. Vigorous spreading canes are ideal for stabilizing banks, slopes and natural hedges. Even among fancier roses, the simplicity of this one is just right. Small bright red hips in fall. Often seen in colonies along streams, roads and open woods throughout New England. Can easily be kept in check by mowing around the edges, but runners do pop up—plant away from areas where you walk barefoot. Highly adaptable to both wet and dry locations. Full sun to partial shade. This species is much more resistant to foliage diseases than other roses. Z2.

***520A** Carolina Rose, $19.50*

***R.* 'Chinook Sunrise'** 4-6' x same. Complex hybrid. Vineland Res Stn, Ontario, 2019. Another exciting breakthrough in the world of hardy apricot roses. We're excited to offer this exquisite multicolored rose from Canada's 49th Parallel Series. Apricot buds open to semi-double 2–3" bright coral-pink blossoms that lighten to create a kaleidoscope of shades from June until frost. Glossy deep green leaves are black-spot resistant. Low-maintenance non-suckering shrub rose. If you only have space for one rose, this might be the one. Z3. **Indigenous Royalties.**

***521A** Chinook Sunrise Rose, $19.50*

***R.* 'Grootendorst Supreme'** 3-4' x same. A sport of F.J. Grootendorst (*R. rugosa* x Mme. Norbert Lavavasseur) Skinner, Canada, 1908. *Rugosa* hybrid. Small lightly fragrant quarter-sized red blooms are fringed like carnations. Very unusual and attractive with a long bloom season, often going until frost. Small foliage is deeper green than the standard Grootendorst. Upright arching yet compact form. We think this little rose is quite cunning. Rugged, too. Ours survived bushhog and trampling horse hooves alike—we've since moved it to a safer spot on the farm. Z3.

***522A** Grootendorst Supreme Rose, $19.50*

***R. pimpinellifolia* 'Harison's Yellow'** 6' long canes. *R. pimpinellifolia* x *R. foetida persiana*. 1830. Yellow roses up north are rare. Harison's is a classic deep yellow. Creates a brilliant spectacle every June. Licorice-scented 2" double flowers trail down long arching canes of delicate greyish-green foliage. Large thorns. Bred by an amateur propagator named Harison who crossed Scotch Briar and Persian Yellow. Z4.

***523A** Harison's Yellow Rose, $19.50*

R. rugosa 4-6' x same. Also called **Japanese Rose** or **Beach Rose**. Vigorous spreading shrub with dark green wrinkled (rugose) leaves. Flowers range from deep pink to light pink. Large edible red hips up to 1" are good for jams, teas and fresh eating right off the bush. Deb Soule of Avena Botanicals uses *rugosa* petals in her much-loved Rose Petal Elixir. Considered by herbalists of Western, Chinese and Ayurvedic traditions to be rejuvenating and cooling. Blooms form on both old and new wood, so pruning necessary only to control size. Prefers full sun and well-drained sandy soil but also flourishes in fertile garden beds. Tolerates salt, pollution and drought; practically care-free. Native to China and Japan. Z2.

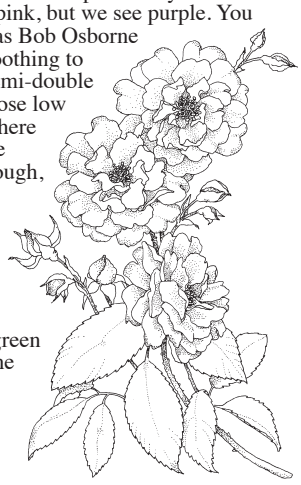
***525A** Rosa Rugosa, bundle of 5, $17.00*

R. r.* 'Scabrosa'** 5-6' x same. Harkness intro, UK, 1950. Also called ***R. superba. The epitome of the old-fashioned straight *rugosa* rose with all the excellent *rugosa* qualities to the max. One of the absolute best roses for the edible landscape. Sweetly scented very large single deep pink flowers and huge orange-red hips almost as big as cherry tomatoes. Showy yellow stamens. Recurrent bloomer. No frills, no bells, no whistles. Just beautiful flowers and large hips. Large dense hedge-forming shrub with glossy green leaves. Good fall foliage color. Extremely hardy and disease resistant. Z3.

***526A** Scabrosa Rose, $19.50*

***R.* 'Schneeköppe'** 3x3' Also knows as **Snow Pavement 6446**. Baum, Germany, 1986. Very faint lilac-purple blooms are practically white but most definitely not so. Some say slightly pink, but we see purple. You might say white "infused with lavender" as Bob Osborne notes. Whatever you call it, the color is soothing to the eyes. A personal favorite of John's. Semi-double (12–16 petals), recurrent and fragrant. Loose low shrubby form spreads slowly but suckers here and there. Red hips. Clean foliage, disease resistant. The Pavement series roses are tough, low-growing, salt-tolerant and can handle partial shade. Z3.

***527A** Schneeköppe Rose, $19.50*



***R.* 'Sir Thomas Lipton'** 5-8' x 4-7' *R. rugosa alba* x Clotilde Soupert. Van Fleet, US, 1900. *Rugosa* hybrid. Fragrant pure white double blooms show hints of green on overcast days when the petals reflect the leathery medium-green foliage. Upright canes are vigorous. Works well as a shrub rose in a thorny hedge and offers repeat blooms, probably more so in warmer regions. Shows good disease resistance even in humid climates. Named for the man who brought us Lipton tea. Z3.

***528A** Sir Thomas Lipton Rose, $19.50*

***R.* 'Thérèse Bugnet'** 6x4' (*R. acicularis* x *R. kamtchatica*) x [(*R. amblyotis* x (*R. rugosa plena* x Betty Bland)] George Bugnet intro, Alberta, Canada, 1950. Vigorous upright fountain-shaped *rugosa* hybrid. Extremely fragrant large 3–4" ruffled soft lilac-pink double flowers have an informal "old rose" look. Blooms prolifically in late spring and repeatedly into fall. The first flush is so full of blossoms that the foliage is obscured. For maximum flowers, train canes laterally on a trellis or fence. Practically thornless near the blossoms, making it easy to pick. Long narrow grey-green foliage. Canes turn red in winter—beautiful in the snow. Disease resistant. Z3.

***529A** Thérèse Bugnet Rose, $19.50*

***R.* 'Wasagaming'** 5-6' x same. (*R. rugosa* x *R. acicularis*) x Grüss an Teplitz. Skinner, Manitoba, 1939. Double lilac-lavender-rosy blooms are fragrant, lush and prolific. Very cold-hardy rounded vigorous shrub will readily sucker. Rose expert Suzanne Verrier called it "a standout among hundreds of other roses." The name refers to a town inside of the Riding Mountain National Park in Manitoba and is derived from an Anishinaabe phrase *washagama saageygun*, which translates as 'clear water lake.' Tolerates partial shade. Z2. **Indigenous Royalties.**

***530A** Wasagaming Rose, $19.50*

Old-fashioned Roses

Roses grown in Europe before 1800 are referred to as "Old World" roses, including the cultivars of *Rosa gallica* and *R. alba*. Their pink colors ranged from the deepest dark purple of 'Cardinal de Richelieu' to a faint pink blush like that of 'Chloris'. There were no reds among these antique roses and, though rich in fragrance, they bloomed only once per season. In the late 1700s red roses with repeat blooming tendencies were introduced from China, shifting the focus of rose breeding toward those traits. Demand for the aromatic and medicinal qualities of the Old World roses declined, supplanted by flowers that lasted long through the season. The hybrids created since the 1820s are called "modern" roses and are much more commonly seen in gardens today.

R. gallica is considered the oldest rose, steeped in history, legend and myth, and still grows wild in some places in the Caucasus, the mountainous region between the Black and Caspian seas, where it originated. Its exact origin is unknown but it can be traced back fourteen centuries when it was considered a symbol of love by the Persians. The aromatic petals hold their scent better than any other rose and have long been considered medicinal. This species contains hundreds of different cultivars, some very similar and others unique. Most have compact shrub habits and are generally very hardy. Most modern-day roses are presumed to be descendants of the *gallicas*.

The *albas* are almost as old as the *gallicas* and are also believed to have traveled west from the Caucasus with the Greeks and Romans. Many of the *alba* cultivars were bred in the 1800s in Europe. Though they flower only once, they should not be overlooked, as their beauty and fragrance are unparalleled by any modern rose. They are considered "tree roses" with tall canes that can be trained to fences, pillars and stonewalls, like climbers. Unlike many roses, *albas* bloom on old wood—if pruned too heavily, they can take years to flower again. Like heirloom apples, they are actually more disease resistant than many of the modern hybrids.

Growing Roses

Roses prefer full sun (at least 4–6 hrs per day) and a pH of 6.0–7.0. Space 4–6' apart. They will do well in most well-drained soils with a good amount of organic matter. In locations with poor drainage, add gravel at the bottom of the planting hole, or build in drainage. Pick a site with good air flow, but avoid sites with cold northwest winds. Avoid competition with tree roots.

Plant roses as early as soil can be worked. Most roses' roots don't spread beyond the original hole, so dig a bushel-sized hole, as deep as 2' or more. We recommend lots of rotten hay in the bottom of the planting hole. Mix soil with liberal quantities of well-rotted manure and compost. Add a coffee-can of rock phosphate or bone meal.

Soak roots in water overnight or up to 24 hours before planting. Prior to planting, prune roses back to 3 canes, 2–5" tall. Plant them 1" below the level they were in the nursery. Add water as you fill in the hole to puddle it in. Mound soil around branches to prevent them from drying out, and to encourage buds to sprout. As the buds open, pull back the soil to the correct level.

Shrub roses and climbers will require little pruning in later years. Any pruning should wait until after the forsythia bloom. Remove dead or broken branches, and periodically cut out the oldest wood. Keep roses well mulched to retain moisture and reduce weeds. Add 2 shovelfuls of composted manure to each crown in late fall.

Willow *Salix* spp.

The genus *Salix* comprises hundreds of different species of plants most commonly called willows but sometimes called **Osier** or **Sallow**. Willows grow all over the world. Some, like the weeping willow, are towering specimens. Others are short scrubby bushes; willows growing in the arctic can be 100 years old but only 2' tall! Uses include ornamental landscaping, shade, basket-making, erosion control, timber, fuel and medicine. All parts, especially the bark, contain salicin, used for relief of pain and fever for hundreds, or even thousands, of years. Aspirin is a synthetic analog of salicin. Willows feed local wildlife, insects and birds. We plant them near the orchard to provide early season forage for our native pollinators. All prefer sun and loamy wet soils, but are adaptable, easily transplanted and fast growing. (1-2')

***S. gracilistyla* 'Melanostachys' Black Pussy Willow** 6-10' x same. Very attractive unique fast-growing plant for wetland areas. Deep purple-black male catkins in early spring; cut branches are marvelous in a vase. The rather short foliage emerges orange and then turns a deep green. Stems turn a rich purple-black in winter. Attractive dark colors all year. Winner of Royal Horticulture Society's Award of Garden Merit. Prune in summer or fall. Adaptable. Prefers moist soil but will tolerate dry as well. Native to eastern Asia. Z4. **ME Grown.**

***538A** Black Pussy Willow, $14.50*

***S. g.* 'Mt. Aso' Japanese Pink Pussy Willow** 6x6' Possibly a hybrid of *S. gracilistyla* x *S. caprea*. Male specimen selected in Japan by Dr. Tsuneshige Rokujo. Pink buds open to cheery rosy pink catkins for a stunning early spring display. When the plants in our stark warehouse began to reveal their darling daubs of pink, the crew gathered round and cooed as if we'd discovered baby bunnies. Excellent in cutflower arrangements. Foliage opens pink and turns rich blue-green with prominent veins and soft fuzzy undersides. Catkins form on second-year wood. Coppice just after flowering to keep form pulled in and less rangy. Easy to maintain. Prefers full sun and sandy soils but will do fine in average or moist conditions. Z4. **ME Grown.**

***539A** Mt. Aso Japanese Pink Pussy Willow, $14.50*

***S. purpurea* 'Nana' Blue Leaf Arctic Willow** 3-5' x 3-6' Selection of Purple Osier. Small narrow blue foliage (actually greenish above and blue beneath) and delicate thin long red or green stems on a medium-sized spreading shrub. The graceful thin stems sucker, layer and form a thick and highly attractive ornamental mass. Long cultivated and coppiced for a fine-textured basket-making material. Excellent bank or hedge plant, especially in wet areas but also quite suitable for a highly visible location. We've seen it looking great in a perennial bed. If it gets overgrown, cut it to the ground every couple of years and it'll come right back. Native Europe to North Africa to Japan. Z3. **ME Grown.**

***540A** Blue Leaf Arctic Willow, $14.50*

Elderberry *Sambucus* spp.

Elderberry trees appear in myths from days of yore, thought to possess magical and protective powers. Dangling clusters of edible purple-black berries ripen in late summer on this broad vigorous multi-stemmed shrub. The fruit is highly nutritious and medicinal. A century ago, every grandmother knew how to make the perfect elderberry pie. Recipes for jam could be found in all the old farm cookbooks. Elderberries are making a big comeback as folks rediscover the scrumptiousness of elderberry jelly, cordial, elixir and wine. The large creamy-white flower clusters, or cymes, that cover the shrub in early summer make delicious fritters. Dry them for a fragrant wintertime cold-and-flu remedy tea. For centuries, humans have used this plant's medicinal qualities to treat a wide range of ailments and to boost the immune system. Hippocrates is said to have called the elder tree his "medicine chest." Birds love the fruit, and the blossoms attract beneficial insects and pollinators.

Note: Cooking elderberries is essential to breaking down toxic cyanide-inducing glycosides in the seeds. Not for fresh eating.

The European elderberry, *S. nigra*, is more tender than the natives, but ours in Zone 4 seem to be almost as hardy. *Canadensis* and *nigra* are both delectable and will pollinate each other.

Elderberries are low-maintenance and easy to grow. With a little attention, they will provide strong yields of fruit for several decades. **Considered self-fertile but planting multiple varieties or even multiple species will improve fruit set.** (1-3')

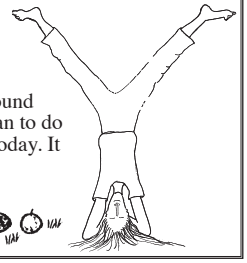
***S. canadensis* 'Adams No. 1'** 6-12' x same. NY Ag Exp Stn intro, 1926. Selected in 1915 from the wild by William Adams in Union Springs, NY, and sent to Geneva where it was introduced 11 years later. Large berries and fruit clusters make for easy and fast picking. If you're heading to a potluck and need to make a pie in a pinch, Adams is the shrub you want. Very large vigorous strong productive bush. Z3. **ME Grown.**

***541A** Adams No. 1 Elderberry, $18.75*

***S. c.* 'Bob Gordon'** 6-8' x same. MU intro, 2011. Wild seedling selected by Robert Gordon in Osceola, MO. Large clusters of large dark berries. High Brix levels makes this elderberry a good one for winemakers. Upright slightly spreading habit. Z4. **ME Grown.**

***542A** Bob Gordon Elderberry, $18.75*

2001: Someone dislodges a kidney.
Bunk: Because of the cold wet work in the basement tagging and sorting trees and pulling orders, we had begun to see a number of staff injuries. A long-time staff member had a background in physical therapy. Under her guidance, we began to do twice-daily stretching, a practice that continues today. It helped to reduce injuries.



An Ode to Bunk

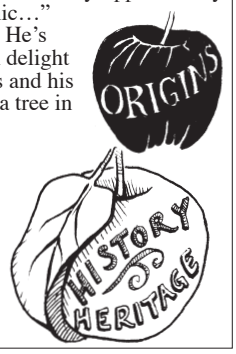
Eleven years ago, John Bunker picked me up from the airport and drove me to his homestead where I would apprentice for two seasons, then return to live and put down roots for another six. On that car ride, only my second time meeting him, he told me the entire juicy history of the Frostbite apple and immediately enlisted me in planting seedlings for his red-fleshed apple breeding experiment. I was officially hooked on apples.

I'd go on to join him in tending his orchards and gardens, managing his apple CSA operation and working at Fedco—I generally immersed myself in his world. We'd have dinner often, Cammy cooking a superb homegrown meal, Bunk keeping the hard cider flowing all evening. Invariably, there'd be pies to sample or apples to taste and compare, slices laid out upon our purist apples-only cutting board! We'd spend long hours weeding, picking, chatting and goofing around. You know you've reached peak apple nerd when you can easily cover the whole alphabet in a strictly apple-variety version of the memory game "I'm going on a picnic…"

People are captivated by John for good reason. He's an educator at heart and approaches his work with delight and wonder. His enthusiasm and joy are infectious and his generosity runs deep. (I once watched him dig up a tree in his own orchard because his friend wanted that variety.) His love of posterboard-and-sharpie signs has been unrivaled since about '99.

John was my first mentor, the first grown-up who believed in me, and I'm forever grateful for that. He gives people room and encouragement to grow and steps back to watch them succeed. Thanks, John. Thanks for trusting us to take up your mantle.

– Emily Skrobis



***S. c.* 'Goodbarn'** 5-10' x same. Chance seedling. Elwyn Meader intro, Rochester, NH. Professor Meader named this Goodbarn because it was the good elderberry growing under the eaves of his barn in New Hampshire. Another of the many fine plants Elwyn's son John has brought to our attention. Thanks, John! Hardy, vigorous with apparent self-fertility. It blooms heavily and produces large crops annually. Z3. **ME Grown.**

***543A** Goodbarn Elderberry, $18.75*

***S. c.* 'Johns'** 8-10' x same. Adams No. 1 or Adams No. 2 x open-pollinated. Nova Scotia Exp Stn, 1954. Very vigorous. One particular cutting in our garden grew 5' in one season and had berries and flowers at the same time late into the summer. Z3. **ME Grown.**

***544A** Johns Elderberry, $18.75*

***S. c.* 'Nova'** 6-8' x same. Open-pollinated seedling of Adams No. 2. EL Eaton intro, AgCanada Res Stn, Kentville, Nova Scotia, 1959. Selected in 1946 and named for its province of origin. Large sweet fruit matures early and uniformly. Suckers easily. Z3. **ME Grown.**

***546A** Nova Elderberry, $18.75*

***S. c.* Scotia** 8-12' x same. Seedling of Adams 2. Kentville, Nova Scotia, 1960. High-yielding cultivar popular with market growers in Canada. Selected for high levels of sugar compared to other elders. Berries are on the small side. Showing serious vigor in our trials. Z4. **ME Grown.**

***547A** Scotia Elderberry, $18.75*

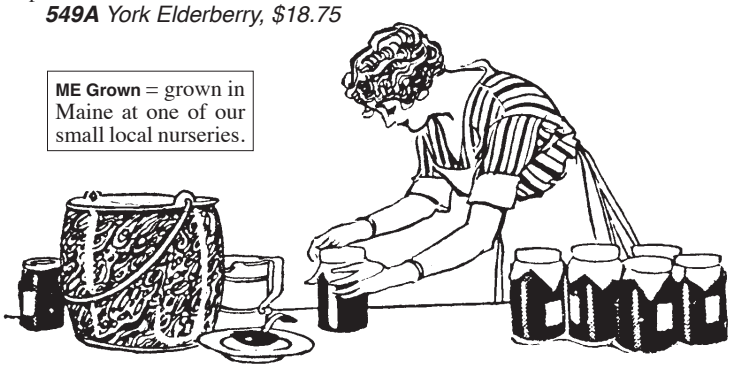
***S. c.* 'Wyldewood'** 6-12' x same. Selected from wild bushes in 1995, introduced in 2010, MU/MSU, by PL Byers and AL Thomas. A consistently high-yielding elderberry cultivar, popular in the Midwest. Some trials are showing it produces as much as Adams, if not more, and ripens a little bit later. Vigorous! Give it lots of room. Z3. **ME Grown.**

***548A** Wyldewood Elderberry, $18.75*

***S. c.* 'York'** 4-10' x same. Ezyoff x Adams No. 2. NY Ag Exp Stn, 1964. An old reliable, considered by some to be the largest-fruited and heaviest-bearing cultivar. In most of our Maine trials, this shrub is more compact than Adams, topping out at 4–5', but we've seen a 10' specimen growing on a compost pile. Persistent and will bear well for many years alongside other varieties. Heavy clusters of mildly tart large berries that ripen after Adams. Z3. **ME Grown.**

***549A** York Elderberry, $18.75*

ME Grown = grown in Maine at one of our small local nurseries.



Growing Elderberries

Elderberries are best grown in rich soil with a pH of 5.5–7.5 but are adaptable to a variety of soil types. They love compost! Add compost to the hole at the time of planting and every spring after that. They prefer moist soil but will tolerate poor drainage and temporary flooding. On the St. Croix River, we've harvested elderberries from the canoe! Plant in full sun. Susceptible to borers when weeds are allowed to crowd the base. Control weeds by mulching with a thick layer of hay, leaves or wood chips. Aggressive weeding around elders will disturb their shallow roots and risk injury to the plant.

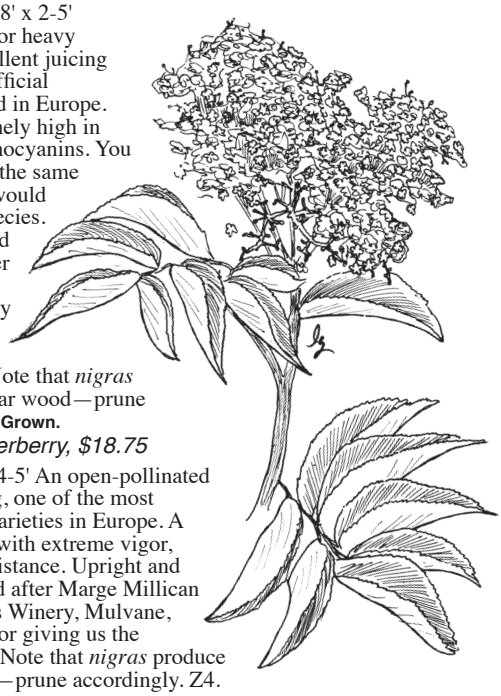
Pruning for *S. canadensis*: in spring, while plant is still dormant, prune away any weak, broken or dead canes. New canes will emerge. Fruit is produced on both new and old wood but best sets are on one- and two-year canes. Periodically cut out the oldest wood. Alternately, some people prefer to cut elders back to the ground each year and treat them as perennials. The latter plants will produce fewer but larger clusters.

S. nigra fruits on second-year wood. It's ok to prune in spring, but be sure to leave first-year canes for the next season's yield.

***S. c.* Elderberry Seedlings** Each one is grown from cold-hardy seed and will be a totally unique plant. Some of our best plants grew from batches of such seedlings. Z3. **ME Grown.**

***550A** Elderberry Seedling, $18.25*
***550B** Elderberry Seedlings, bundle of 5, $77.50*

***S. nigra* 'Korsor'** 6-8' x 2-5' Danish cultivar bred for heavy fruit clusters and excellent juicing quality. *Nigra* is the official medicinal species used in Europe. The berries are extremely high in immune-boosting anthocyanins. You can use them in all of the same wonderful ways you would use the *canadensis* species. Leaves are broader and darker green than other elderberries and the plant gives off a musky scent when you brush past it. Upright habit, extremely vigorous. Note that *nigras* produce on second-year wood—prune accordingly. Z4/5. **ME Grown.**



***551A** Korsor Elderberry, $18.75*

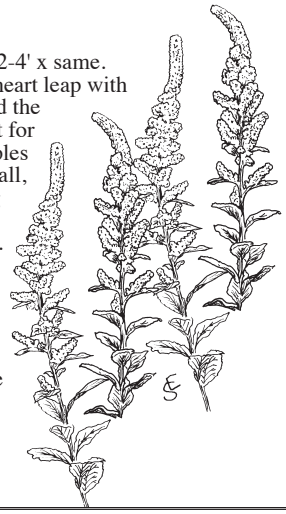
***S. n.* 'Marge'** 4-6' x 4-5' An open-pollinated seedling of Haschburg, one of the most popular commercial varieties in Europe. A heavy-yielding *nigra* with extreme vigor, hardiness and pest resistance. Upright and non-suckering. Named after Marge Millican of Wyldewood Cellars Winery, Mulvane, KS, also responsible for giving us the cultivar Wyldewood. Note that *nigras* produce on second-year wood—prune accordingly. Z4. **ME Grown.**

***552A** Marge Elderberry, $18.75*

***S. n.* 'Samyl'** 5-8' x 2-5' Res Ctr for Hort intro, Aarslev, Denmark. Selected for juice production based on very high anthocyanin content and sweet flavor. Strong upright shoots yield dark glossy berries. Note that *nigras* produce on second-year wood—prune accordingly. Z4/5. **ME Grown.**

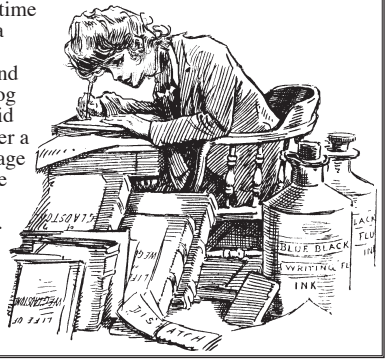
***553A** Samyl Elderberry, $18.75*

***Spiraea tomentosa* Steeplebush** 2-4' x same. Seeing this bonny little plant makes a heart leap with joy. Seriously, it's adorable, and we and the pollinators are obsessed with it. A must for every butterfly garden. Rosy pink steeples emerge as terminal spikes about 4–6" tall, appearing mid-late summer and lasting at least a month. Foliage is medium green, serrated with woolly undersides. Easy to grow. Lovely en masse. Likes average acid moist soils but not picky. Full sun or part shade. We've seen it emerge in newly cut woodlots on dry soil and thriving on pond edges, as single canes or in clumps with multiple blooms. No serious pest or disease issues. Native Nova Scotia to Georgia and inland. Z3. **ME Grown.** (1-3')

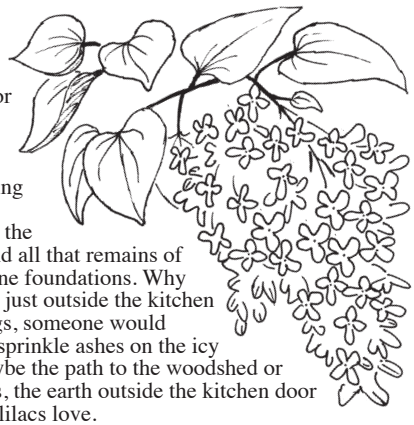


***556A** Steeplebush, $16.50*

2002: Yet another piece of inspired scrap paper.
Bunk: I gave up submitting a time sheet and would instead grab a random piece of scrap paper, scribble my hours on it and send it to Susan [Kiralis, then catalog editor and bookkeeper] who did the payroll. One week I sent her a scrap of paper with a Doré image I had photocopied of two horse riders chatting with a forest background. I wrote a caption. "Why yes, all these trees did come from Fedco." Susan thumbtacked it to her wall. It became the 2002 cover, one of my all-time favorites.



Lilac *Syringa* spp.



Lilacs have been a fixture in the New England landscape for generations. More often than not, when we find old apple trees, the ancient lilacs are not far away. The large rambling suckering shrubs continue to flourish each spring long after the buildings have disappeared and all that remains of homesteads are crumbling stone foundations. Why were the lilacs always planted just outside the kitchen door? On cold winter mornings, someone would clean out the wood stove and sprinkle ashes on the icy path to the backhouse. Or maybe the path to the woodshed or the clothesline. Over the years, the earth outside the kitchen door became more alkaline, which lilacs love.

In the landscape, lilacs are excellent alone or in hedges. Deep green glossy heart-shaped foliage looks good from spring through fall. Intensely fragrant blooms in May over a period of several weeks. Hundreds of varieties have been developed over the ages. Flowers range from singles to doubles, pure white to the deepest purple, not to mention pinks and reds and lavenders of every persuasion. Ornamental, edible (frittered flowers à la elderberry), medicinal, and a great Mother's Day gift. (1-3')

***S.* x *prestoniae* 'Donald Wyman'** 8-10' x same. *S. reflexa* x *S. villosa*. Introduced by FL Skinner, Manitoba, Canada, 1944. Unique spicy-scented deep pinkish-red buds open to single pink flowers on large pyramidal spikes. Every spring the *vulgaris* lilacs come and go. Days later, there is Donald Wyman greeting us as though saying, "And you thought lilac season was over!" Originally developed in the 1920s in Ottawa by Isabella Preston (1881-1965), the first woman to make renowned contributions to the lilac breeding world. Named for a former director of Arnold Arboretum, one of America's greatest horticulturists. Upright dense form with few or no suckers. Z3.

***557A** Donald Wyman Lilac, $18.75*

***S.* x *tribrida* 'Miss Canada'** 6-9' x same. *S.* x *josiflexa* Redwine x *S. prestoniae* Hiawatha. William Cumming intro, Morden Ag Res Ctr, Morden, Canada, 1967. Another outstanding Preston hybrid. Masses of dark reddish-pink buds open to lovely fragrant single deep pink blossoms after most other lilacs have faded. The florets are unique in shape, like little trumpets clustered along the flower stem with spaces in-between. Plant singly as a specimen rather than in a hedge, preferably near the entrance to your home. Like other Prestons, can be pruned to tree form; won't sucker and eat the building. Z3.

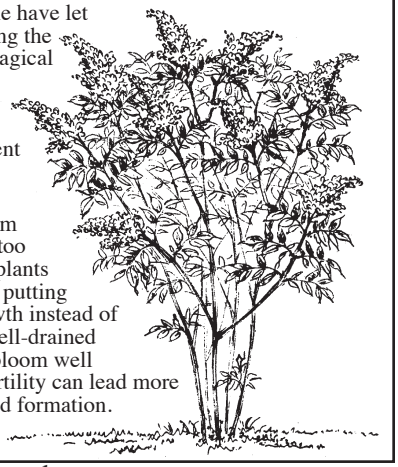
***558A** Miss Canada Lilac, $18.75*

Growing Lilacs

Lilacs are adaptable, easy to grow, nearly indestructible and practically maintenance-free. Plant them in a well-drained location in moderately rich soil. Sandy gravelly loam is perfect. They prefer at least 6 hours of sunlight each day. We suggest planting them with a shovelful of wood ash or lime, then add another shovelful of either every 3 years. A yearly mulch of manure or compost will encourage spectacular annual blooming. Pink, lavender and blue lilacs color up best in soil with a neutral pH.

How to prune lilacs

If you choose to prune your lilacs, do it right after flowering. Late-season pruning removes next year's buds. As the plant matures, prune off a quarter of the new suckers and the oldest growth (a few main stems each year). Some growers prefer to keep the plant low and bushy. Do so by "topping" it off every year: prune any upright branch back to a junction with a lower branch. Others prefer a tall tree-like form.



Our friends Philippe and Danielle have let theirs soar to 8' or more, removing the lower branches and creating a magical walkway in the process. Lilacs are more than willing to cater to your own personal vision. Have fun! No need to cut off spent flowers except for appearance.

Why isn't my lilac blooming?

Too shady: lilacs need sun to form blossoms. Over-pruned: pruned too late, removed buds. Also, some plants respond to excessive pruning by putting their energy into vegetative growth instead of flowering. Too wet: lilacs like well-drained soil. Over-fertilized: lilacs will bloom well without assistance. Too much fertility can lead more vegetative growth and inhibit bud formation.

***S. v. alba* Common White** 12-15' x 8-12' The only common thing about this lilac is that it is one of only two types you see growing where the old homesteads once stood. May be the oldest loveliest purest white of them all with single flowers on a hardy vigorous upright shrub. If you like a *menu fixe* rather than a bazillion options, this is the lilac for you. No one really knows its exact origin, but it predates the idea of heirlooms and hails from a time when there were only a couple of lilac strains in circulation (now there thousands). Like its counterpart Common Purple, it gets the job done without messing around. Z2.

***559A** Common White Lilac, $18.75*

***S. v.* Common Purple** 12-15' x same. A mass of medium-light purple blooms every year. A magnificent New England sight for nearly 400 years. When a friend looked out John's living room window and thought he had some fancy new cultivar, John chuckled, "Nope, just the good old common purple." Never disappoints. Suckers freely, the best lilac for a spreading hedge. Z3.

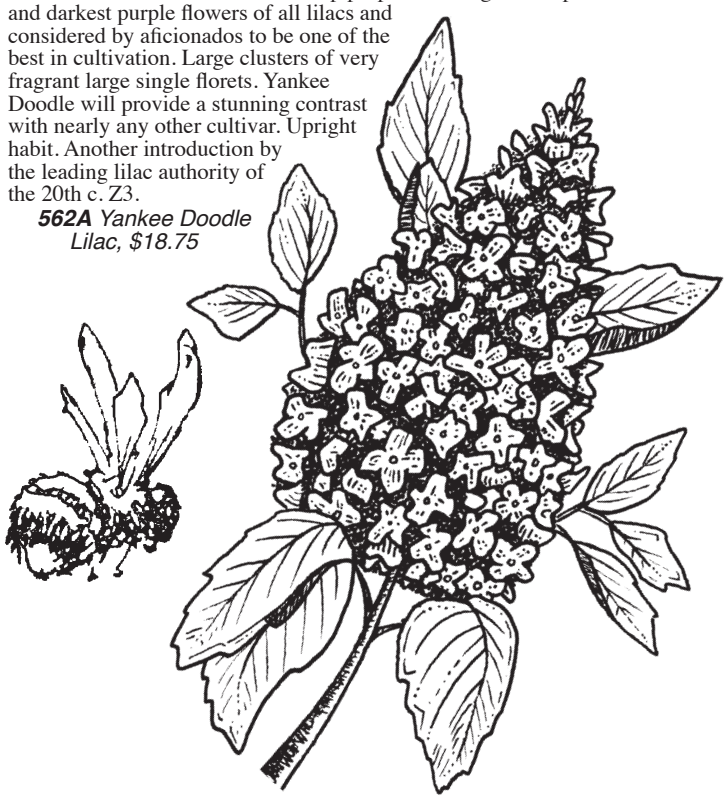
***560A** Common Purple Lilac, $18.75*

***S. v.* 'President Grevy'** 12-15' x 12' Victor Lemoine et Fils, Nancy, France, 1886. Lavender-pink buds followed by fragrant double light violet blue-tinted flowers on very large open pyramidal panicles. Columnar vase-shaped medium-thick growing habit. Suckers very little if at all. Blooms slightly later than another "blue" lilac, President Lincoln. Dark green foliage. Named for the French politician Jules Grevy, president from 1879–87, distinguished for minimizing presidential power, confirming the establishment of the Third Republic, opposing French colonialism and opposing the demands for revenge against Germany following the Franco-Prussian War. Z3.

***561A** President Grevy Lilac, $18.75*

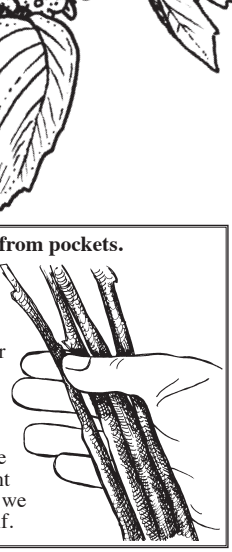
***S. v.* 'Yankee Doodle'** 8x8' Prodige x Rochester. John Fiala intro, Falconskeape, OH, 1985. We brake for deep purple lilacs! While many consider Common Purple the queen of all lilacs, we aren't purists and can't resist the allure of the deep purples. Among the deepest and darkest purple flowers of all lilacs and considered by aficionados to be one of the best in cultivation. Large clusters of very fragrant large single florets. Yankee Doodle will provide a stunning contrast with nearly any other cultivar. Upright habit. Another introduction by the leading lilac authority of the 20th c. Z3.

***562A** Yankee Doodle Lilac, $18.75*



2004: Cider, scions and scrap paper fluttering from pockets.

Bunk: We offered cider apples and grafting scionwood for the first time. Fermented cider was becoming popular again after a very long hiatus…



For many years I had been getting requests for scionwood from across the country. Every spring I found myself with scraps of paper stuffed in my pockets, thumbtacked to the walls, scattered on the floor. It became clear that we needed a better system so we put together a list of available varieties and offered them for sale. At first we sent out a list upon request but eventually—in 2015—we added a scionwood order form to the catalog itself.

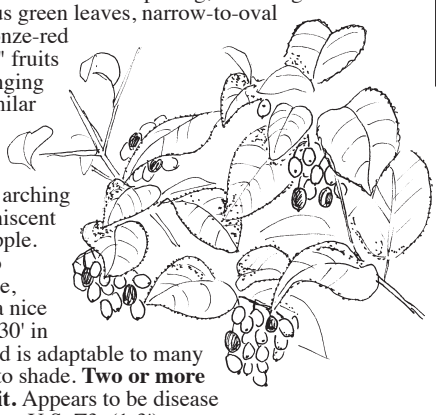
***Viburnum cassinoides* Northern Wild Raisin** 5-6' x same. Also called **Appalachian Tea**, **Raisinberry** or **Witherod** (pronounced *withe-rod*, not *wither-rod*.) Rounded arching dense suckering native shrub. Creamy white flowers with yellow stamens on 2–5" flat-topped cymes bloom from spring to early summer. Highly desired for its edible fruit, which turns from green to pink to red to blue before finally turning black in September. Fruiting clusters feature several colors at the same time. Best eaten when nearly dried out on the branch, if you can get to it before the birds! Foliage, once used in tea, emerges bronze or purple tinted, turning dark green when mature and then orange-red, dark crimson and purple in fall. Good as a specimen but **plant more than one for fruit**. Sun to partial shade. Very rugged: adapts to dry or wet sites. Native to eastern North America. Z3. (1-3')

***565A** Northern Wild Raisin, $19.00*

***V. lentago* Nannyberry** 15-20' x 10-12' Also called **Sheepberry** or **Sweet Viburnum**. Large open vase-shaped suckering shrub with edible oval berries that turn from green to yellow to red to blue-black raisins that persist in winter and are popular with the birds. Large flat-topped clusters of fragrant creamy white flowers are a common sight in spring in the Maine landscape. Shiny foliage, purplish red in fall. Medicinal bark and leaves. Recommended for naturalizing, bird and wildlife habitat, screens and borders. Prefers moist well-drained average soils but adaptable to poor, compacted or dry soils. Sun or shade. **Self-fertile, but plant two or more for better pollination** and fruit production. Native to eastern U.S. and Canada. Z2. (1-3')

***566A** Nannyberry, $16.00*

***V. prunifolium* Black Haw** 12-15' x 8-12'. Creamy white 2–4" cymes bloom in early spring while leaves are still opening, attracting dozens of different pollinators. Lustrous green leaves, narrow-to-oval with pointed tips, turn to bronze-red in fall. Dark bluish-black 1/2" fruits with a waxy bloom form hanging clusters through fall, in a similar way to highbush cranberry. Long used as a food source, eaten raw or put away in preserves. Rounded arching shrub stiffly branched, reminiscent of a wild hawthorn or crabapple. Suckering nature allows it to form a dense colony or hedge, but it can also be pruned as a nice specimen that can reach 20–30' in height. Transplants easily and is adaptable to many soil types, moist to dry, sun to shade. **Two or more plants are required for fruit.** Appears to be disease and pest free. Native to eastern U.S. Z3. (1-3')



***568A** Black Haw, $16.00*

***568B** Black Haw, bundle of 5, $68.00*

Special Plants for Challenging Locations

Drought Tolerant:	**Wet Tolerant:**	**Shade:**
Amelanchier	Amelanchier	Black Cohosh
Bearberry	Birch	Bunchberry
Carolina Allspice	Black Cohosh	Pagoda Dogwood
Catmint	Highbush Blueberry	Ferns
Chokeberry	Buttonbush	Balsam Fir
Coreopsis	Chokeberry	Geranium
Cornelian Cherry	American Cranberry	Wild Ginger
Chestnut	Dawn Redwood	Hazelnut
Elm	Redosier	Hops
Grape	Elderberry	Hosta
Heather	Elm	Jack-in-the-Pulpit
Hens & Chicks	Ferns	Lady's Mantle
Huckleberry	Blue Flag Iris	Sugar Maple
Lavender	Marshmallow	White Pine
Lilac	Swamp Milkweed	Pulmonaria
Lingonberry	Northern Wild Raisin	Spicebush
Nannyberry	Spicebush	Viburnum
Beach Plum	Steeplebush	Wintergreen
Rosa Rugosa	Sweetflag	Witch Hazel
American Smokebush	Turtlehead	
Ohio Spiderwort	Willows	
Spruce	Winterberry	
Fragrant Sumac	Witch Hazel	

Groundcovers

You'll find more groundcovers, like Canadian wild ginger, bunchberry, creeping thyme, geranium and arnica, in the herbaceous perennials, beginning on page 55.

***Arctostaphylos uva-ursi* Bearberry** Also called **Kinnikinick**, **Hog Cranberry**, **Mealberry**, **Sandberry**, **Mountain Box** or **Bear's Grape**. Delicate low-growing beautiful glossy evergreen spreading groundcover. Beautiful in rock gardens. One plant can spread to 15'. Small pinkish-white flowers in spring. Small bright red drupe-type berries color up in late summer and persist into winter. Too insipid for fresh eating, but good fried with fish. Leaves are diuretic, astringent and antibacterial. Prefers poor sandy infertile acid soils, tolerates salt. Can be sensitive to root disturbance, thus finicky in transplanting and may be slow to establish. Set plants 1–2' apart. No need ever to prune or fertilize. Sun or partial shade. Native to North America and Eurasia. Self-pollinating. Z2. **ME Grown.** (potted transplants)

***580A** Bearberry, $19.25*

***Calluna vulgaris* Heather** Magical, mythical and medicinal evergreen groundcover features a spread of flowers and foliage that change color throughout the season. Heathers are our guilty pleasures—for every two you buy, we buy like 20 for our own gardens! Each year we vary our selection but always offer the hardiest varieties proven to flourish in northern climates. Revered in the British Isles, important medicinally in teas, honey, liniments and ointments. First fermented a few thousand years ago, used in gruit, ale, and might be the original ingredient for the first whiskey. Branches used in thatching, bedding, basketry, rope and broom-making. Flowers attract bees, butterflies and moths, especially when planted in masses. Recommended for rock gardens and edges of paths—or for opening the portals to the fairy world.

Requires acidic soil and full sun to partial shade. Plant about 18" apart each way and let it spread. Mix peat into the soil to lower the pH if necessary—see planting instructions for cranberries and blueberries. We recommend pine needles as an acidic year-round mulch. Does not like high fertility or wet spots. Full sun and windy exposures intensify their colors. Shear every April for best bloom. Native to the dry forests, heaths and bare grounds of Britain and Ireland. More recently naturalized in North America. Z4. (4" pots)

***C. v.* 'Silver Knight'** 12-18" x 18-24" JW Sparkes intro, Beechwood Nursery, Worcestershire, England, 1966. Soft single lavender flowers from August to September. Foliage stays consistently woolly and silvery-grey, becoming deeper grey with violet hues in winter. Erect form.

***L581A** Silver Knight Heather, $12.50*

***C. v.* 'Winter Chocolate'** 6-10" x 12-18" JW Sparkes intro, Beechwood Nursery, Worcestershire, England, 1966. Pale lavender flowers August through October. Bronze foliage in winter with orange-red tips emerging in spring. As summer progresses, foliage becomes more golden green or chartreuse, with dabs of pink closest to the stem and more lime green farther up the spears. Deeper green foliage at the base and chocolaty stems offer striking contrast. Compact upright form.

***L582A** Winter Chocolate Heather, $12.50*

***Erica cinerea* 'C.D. Eason' Bell Heather** 8-10" x 12-24" Maxwell & Beale intro, Dorset, England, 1929, from a wild specimen. Especially distinct bell-shaped bright magenta flowers begin to show around Mother's Day with profuse repeat blooms over a long season. Deep green foliage is more fern-like and wispier than heathers with a more mounded mat-like growth habit. In our trials in central Maine, bell heather offers some of the first early spring bee forage with blossoms hanging on through early snowfall. Same cultural and pruning requirements as heather. Native to western Europe and the British Isles. Zone 5, but possibly Zone 4 with adequate snow cover. (4" pots)

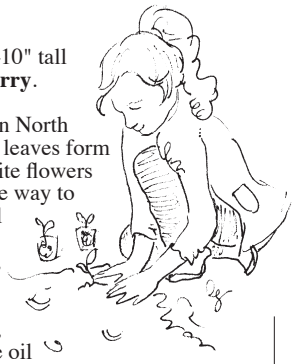
***L584A** C.D. Eason Bell Heather, $12.50*

Shearing Heather

Heathers need to be pruned back every April or they will become woody and bare in just a few short years. The stems will not produce new growth where they flowered the previous season. Once these bare areas get leggy, they will no longer produce foliage at the base. If the plant is cut back to a woody base, no new growth will occur and your heather will be on a downward spiral. If you're not up for shearing, heathers might not be for you.

Shearing can be done with regular clippers like Felcos or with larger shears. Just roughly cut the stems below where they flowered the season before, leaving a few inches of foliage at the base. If done every year it should look like a little mound with a haircut. Next thing you know, bright new growth will start emerging. Shearing not only makes the plants look better but also makes them stronger and more resistant to fungal problems.

More Groundcovers



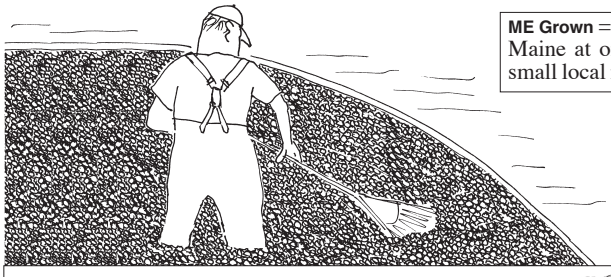
Gaultheria procumbens **Wintergreen** 6–10" tall with a 1–3' spread. Also called **Eastern Teaberry**. Herbaceous aromatic rhizomatous evergreen groundcover native to the woodlands of eastern North America. Glossy dark green elliptic-to-oblong leaves form on erect stems. Nodding bell-shaped waxy white flowers bloom from the leaf axils in June. Flowers give way to vivid red berries. Leaves will take on beautiful burgundy shades in the fall. Excellent winter food source for free-range chickens, partridge, turkeys, and some two- and four-legged mammals. Fragrant leaves contain methyl salicylate, a potent external anti-inflammatory, and can be used to make a poultice or massage oil to ease arthritic pain and sore muscles. Designated Maine's State Herb in 1999. Plant 16" apart in dappled shade in moist but not boggy woodland soil. **Self-pollinating.** Z3. (3½" pots)

L585A *Wintergreen, $9.00*

L585B *Wintergreen, bundle of 3, $23.00*

Vaccinium macrocarpon **'Stevens' American Cranberry** This is the cranberry of holiday sauces, bread and jelly. Dense low lustrous evergreen groundcover, reddish purple in fall and loaded with large red berries. Once established, makes a beautiful and edible "lawn." Handpick or rake like blueberries before hard frost. Use fresh, freeze or store in a cool basement or root cellar for months. Bitter and alkalizing effects make it one of the most common remedies for bladder infections. An excellent source of vitamin C. Annually flooded for frost protection and harvesting convenience in commercial operations, but not necessary in home plots. Adaptable to everything from bogs to dry rocky outcroppings. Self-pollinating. Easy to grow; pest and disease resistant. Native to northeastern U.S. and Canada. Comes in a bushy 6" clump which can be carefully divided or planted as a whole and divided in future years. Z2. **ME Grown.** (1-gallon pots)

586A *Stevens American Cranberry, $20.50*



ME Grown = grown in Maine at one of our small local nurseries.

Growing American Cranberries

American Cranberries are shallow-rooted and require light acid soil (pH 4.0–5.5), preferably cool, moist and high in organic matter, similar to soil in which blueberries grow well. Will grow in dry locations. Plant them in spring once the ground can be worked in a bed or in a naturalized setting.

We do not recommend mixing in sulfur to acidify the soil. Sulfur is slow-acting and can be added to soil surface in subsequent years if necessary. Mixing it into the soil can damage tender young roots.

For a 5x5' bed:

For acidic "blueberry" soils: If you're fortunate to have a site where blueberries grow naturally, clear a spot of vegetation, cultivate the soil, add some peat and sand if you like, and you're ready to plant.

For sandy soils: Remove soil 10" deep and mix soil with 2 bales of damp peat moss. Replace mixture in bed and cover with 2" of sand.

For clay or silty soils: Remove soil 10" deep and place it around the edge of the bed as a berm. Replace the soil with a 50-50 mix of soil and peat (about 2 bales of peat). Cover with an additional 2" of sand. Plant cranberries 12" apart, so the roots are in the peat and the sand is covering the lower portion of the stems.

Remove all weeds as needed. Water the plants weekly so that the peat is moist but not saturated. Add nitrogen at a rate of ⅓–1 lb (or 20–50 lbs of manure) per 100 sq feet each year. No pesticides should be necessary.

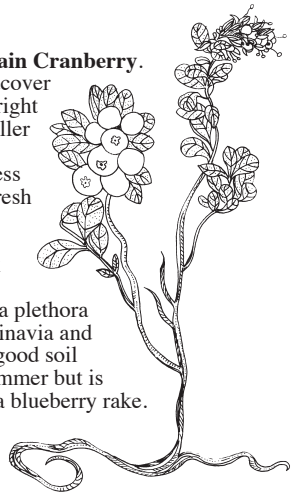
Handpick before first hard frost when berries are red.

In late fall, cover the bed to protect the plants from the drying effect of winter winds. Use a mulch of leaves or pine needles; or cover with polyester row cover and then clear plastic; or cover with row cover and then plenty of leaves.

Remove mulch in early April. Protect flower buds by covering with plastic during frosty nights.

Every two years partially cover the plants with a ½–1" layer of sand in spring before growth begins. This will help produce more berries and keep weeds down.

Lingonberry *V. vitis-idaea*



Also called **Foxberry**, **Cowberry**, **Mountain Cranberry**. Vigorous shallow-rooted spreading groundcover is related to blueberries and cranberries. Bright red glossy nutritious fruits are slightly smaller than lowbush blueberries. Tart until dead ripe, then has excellent flavor, richer and less astringent than cranberries. Can be eaten fresh but primarily used in sauces, jams, syrups, fruit leathers, juices and wines. Stores up to 2 months in the fridge. Small shiny dark green foliage is quite lovely. Adorable tiny bell-shaped white flowers in spring attract a plethora of pollinators. Extremely popular in Scandinavia and now catching on in the U.S. If you've got good soil for blueberries, try these. Ripens in late summer but is best after a frost. Harvest by hand or with a blueberry rake. Will produce 1–2 lbs per plant depending on the variety and can produce for up to 20 years. Prefers full sun and poor sandy acid (pH 4.5–5) soils. Plant 12–18" apart in rows 3–4' apart. **To ensure good fruit production, plant more than one variety.** Native to the colder northern hemisphere. Incredibly tough and very hardy. Z2. All are **ME Grown.** (potted transplants)

V. v.-i. **'Erntedank'** Up to 12" tall. Albert Zimmer intro, 1975. Collected in a wild heath near Uchte, Germany. Produces heavy yields of small- or medium-sized berries.

588A *Erntedank Lingonberry, $19.25*

V. v.-i. **'Erntesegen'** 12-15" Also collected by Zimmer from a wild German heath. High-yielding plant produces very large berries.

589A *Erntesegen Lingonberry, $19.25*

V. v.-i. **'Linnea'** 5-9" Swedish U intro, 1999. Newer cultivar selected from an open-pollinated seedling of Sanna, a wild strain. Strong producer of medium-sized berries.

590A *Linnea Lingonberry, $19.25*

V. v.-i. **Magenta** 12-15" Swedish U of Ag Sciences intro. Vigorous cultivar produces large purplish-red berries. Selected for high yields.

591A *Magenta Lingonberry, $19.25*

V. v.-i. **'Red Sunset'** 8-15" Hartmann's Plant Co intro. Medium-to-large firm flavorful berries. Considered one of the most vigorous cultivars.

593A *Red Sunset Lingonberry, $19.25*

V. v.-i. **'Regal'** 4-8" WI-108, Univ of WI intro, Madison, WI, 1994. From open-pollinated seed collected in southwest Finland. Produces firm small-to-medium berries with good flavor. May bloom twice in one season.

594A *Regal Lingonberry, $19.25*

V. v.-i. **'Ruby'** 12" Also from the Swedish U program. Medium-sized light red berries. Moderately vigorous with lots of spreading rhizomes.

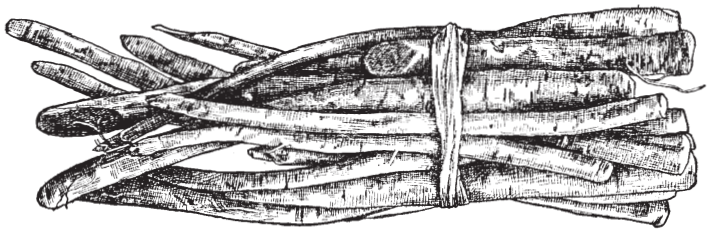
595A *Ruby Lingonberry, $19.25*

Lingonberry Collection Get your patch going and boost pollination with this collection of 5 different varieties, each individually labeled.

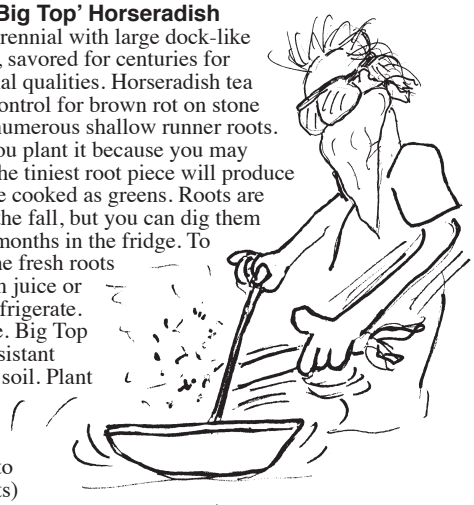
599A *Lingonberry Collection, bundle of 5, $84.00*

Garden Roots

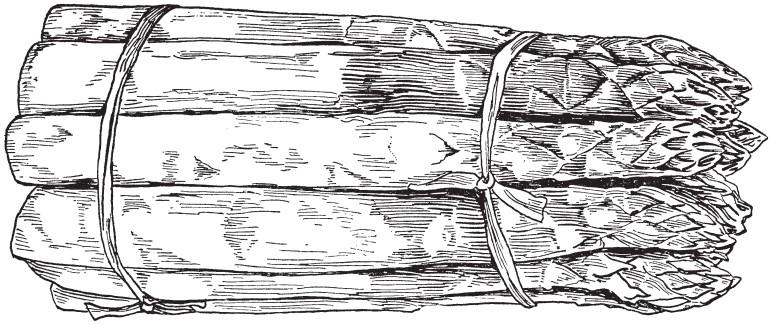
No garden is complete without the classic triumvirate of Horseradish, Asparagus and Rhubarb!



***Armoracia rusticana* 'Big Top' Horseradish**
Exceptionally vigorous perennial with large dock-like leaves and spicy hot roots, savored for centuries for their culinary and medicinal qualities. Horseradish tea is said to be an effective control for brown rot on stone fruits. Deep taproot with numerous shallow runner roots. Choose carefully where you plant it because you may never get it all out. Even the tiniest root piece will produce a new plant. Leaves can be cooked as greens. Roots are traditionally harvested in the fall, but you can dig them anytime. Roots keep 3–4 months in the fridge. To use as a stimulant, grate the fresh roots and mix with a little lemon juice or apple-cider vinegar and refrigerate. Use soon, then make more. Big Top is an especially disease-resistant variety. Prefers moist rich soil. Plant with the slanted cut down and the flat side up, or just toss them in and watch them grow. Native to northern Europe. Z3. (roots)



***L600A** Big Top Horseradish, bundle of 5, $18.75*



***Asparagus officinalis* Asparagus** A spring staple for millennia, may have originated around the Mediterranean Sea, perhaps in Asia Minor. The pharaohs, Greeks and Romans were all aware of its highly nutritious qualities and delectable flavor. The earliest known American horticultural advertisement, from March 1719, is for "English Sparrow-grass Roots." Uncut shoots become a light green feathery hedge, a beautiful backdrop to a flower garden. Honeybees love the dainty dangling flowers of asparagus. Occasionally non–spear-forming females will show up in a planting. Leave them be or rogue them out as you wish. (large-rooted 1-yr crowns)

***A. o.* 'Mary Washington'** Heirloom variety developed by JB Norton, USDA, 1919. Large early green stalks tolerate heat well and demonstrate good resistance to rust. For those of you who know your antique asparagus, Mary was selected from Martha. Of the two, Mary is earlier, more vigorous and more uniform. A parent to many modern varieties and planted in American gardens for more than a century. We're excited to offer this for the first time ever. Very winter hardy. Z3/4.

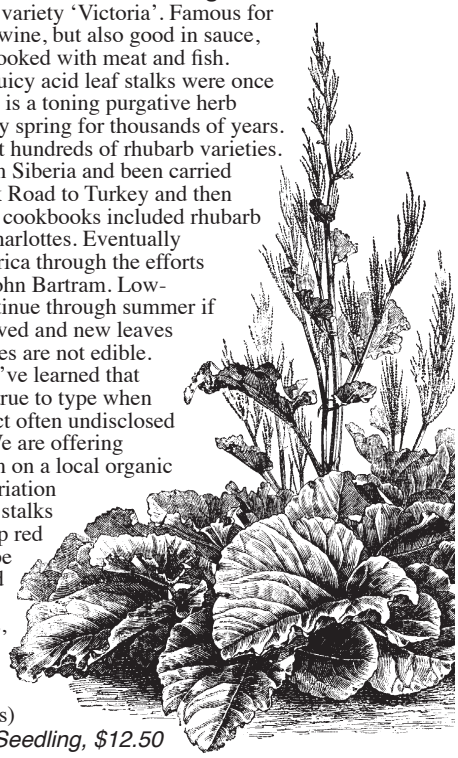
***L601A** Mary Washington Asparagus, bundle of 25, $26.00*

***A. o.* 'Purple Passion'** Developed from the Italian heirloom Violetto di Albenga. Brian Benson intro. Very large deep purple stalk with a creamy white interior. Purple asparagus is actually a type of white asparagus shown the light. Sweeter and less stringy than its green counterparts, so you can use more of the spear. Tender enough to eat raw in salads. Turns green when cooked. Z4.

***L602A** Purple Passion Asparagus, bundle of 25, $26.00*

***Rheum rhabarbarum* Rhubarb Seedlings**
Seedlings of heirloom variety 'Victoria'. Famous for early summer pie and wine, but also good in sauce, bread, juice, soup or cooked with meat and fish. Rhubarb's clumps of juicy acid leaf stalks were once a staple food. The root is a toning purgative herb traditionally used every spring for thousands of years. There are dozens if not hundreds of rhubarb varieties. May have originated in Siberia and been carried across Asia on the Silk Road to Turkey and then into Europe. Victorian cookbooks included rhubarb compotes, fools and charlottes. Eventually brought to North America through the efforts of Ben Franklin and John Bartram. Low-maintenance, will continue through summer if flower stalks are removed and new leaves allowed to grow. Leaves are not edible.

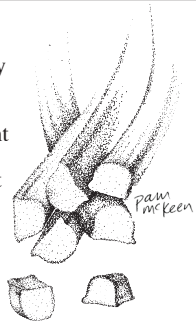
From our trials, we've learned that rhubarb rarely comes true to type when grown from seed, a fact often undisclosed in the nursery trade. We are offering seedling crowns grown on a local organic farm. There will be variation within the crop. Some stalks will be green with deep red bases and others will be solid green or splashed with red. All are vigorous and delicious, and we've enjoyed them in our pies, wines and sauces. Z2.



ME Grown. (1-yr crowns)

***L603A** Rhubarb Seedling, $12.50*

Growing Rhubarb



Plant the top of the root division level with soil surface in well-prepared well-drained rich slightly acid soil (pH 5.5–6.5). Space crowns 2–4' apart in rows 3–4' apart. Add a bushel of well-rotted manure or compost under each crown. When plant is established, fertilize liberally with composted manure and balanced garden fertilizer or compost every spring, as it's a heavy feeder.

Harvest for 4 weeks 2 years after planting. Thereafter you can harvest for 8–10 weeks each year. Never remove more than 2/3 of the stalks from a plant. Water during dry spells for extended season.

Every 10 years or so, divide plants in early spring. Leave about 1/3 of the clump in place, and cut up remaining crowns into fist-sized pieces to replant.

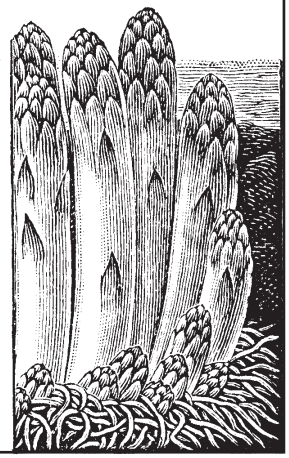
Growing Asparagus

Plant when you receive your order or as soon as the ground can be worked. Requires fertile soil with pH 6.8–7.2 and high levels of phosphorus. Plant 14–18" apart, 6–10" deep, in trenches 4' apart. Or dig your trenches somewhat deeper and fill the bottom with 4" of compost and rotted manure. Lay plants with crown up and cover with 2" of soil. Plants emerge very slowly. As young shoots grow, add soil gradually, just covering the shoots, until the trench is full. In late fall, remove dead stalks and mulch with 3" of manure.

Second summer: Add lime, rock fertilizers and compost as needed. Control weeds but do not injure crowns.

Later years: Same routine but increase fertilizer. Be sure to leave some spears each year to grow stalks that will nourish the roots and give you more spears next year. Keep the bed weed-free and mulched heavily.

Harvest: New research shows that asparagus can be selectively harvested for 2 weeks during the second growing season, for 4 weeks in the third, and a full season thereafter. We recommend caution in harvesting too much too soon. Before the third or fourth season, harvest only the largest shoots from vigorous plants so the young plants can establish themselves.



Mushrooms

In collaboration with North Spore Mushrooms, we're excited to help you to get started on your own fungus garden. These products are all Maine-grown without pesticides, on natural substrates. Most can be refrigerated until you are ready to start growing. We send detailed instructions with your order and you can find more info about each item on our website. We ship mushrooms and tools in April during our regular shipping season.

Please see growing instructions on the next page to decide if you want plugs or sawdust spawn for your mushroom-growing adventure. Kits are a good choice for beginners.

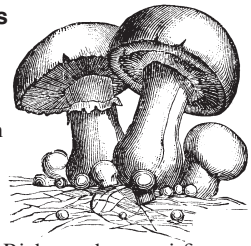
Plug Spawn are small wooden dowels colonized by mushroom mycelium. These get hammered into drilled logs.

Sawdust Spawn comes in a 5½ lb loaf. Depending on variety, it can be crumbled into outdoor beds or used for larger-scale log inoculation projects.

Plug Kits contain 100 plugs, wax, a dauber, 5/16" drill bit and instructions. Everything but the log, drill and hammer to get you started.

Countertop Kits Simply slice open the bag, and keep in a humid environment, like beside the sink. Mushrooms should start to produce "pins" within 2 weeks and will grow quickly. Each kit contains a 4½-lb inoculated sawdust block that could produce up to 3 lbs of mushrooms over 2–4 months. Instructions included. The easiest way to get into growing mushrooms. Makes a great gift.

Agaricus subrufescens **Almond Agaricus**
Related to the well-known portabella, crimini and button mushrooms but has its own unique aroma and flavor reminiscent of almonds. The species grows on composted material and thrives in warmer temperatures. A great addition for the home gardener, can be incorporated with compost into vegetable and perennial plantings and does well in season-extension structures.



610C *Sawdust Spawn, $25.00*

Grifola frondosa **Hen of the Woods** Rich earthy semi-firm mushroom resembles a fat hen with leafy feathers and can weigh up to 20 lbs. This tasty polypore has a flavor akin to eggplant. Will fruit only in oak logs. For success with sawdust spawn, we recommend heat-treating and incubating log segments in **XL Filter Patch Bags** (not needed for plug spawn).

L611A *100 plugs, $16.50* ***L611B*** *500 plugs, $33.00*
611C *Sawdust Spawn, $25.00*

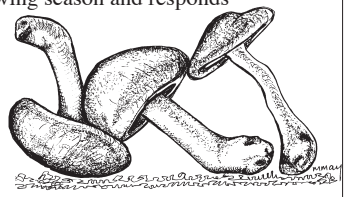
Hericium erinaceus **Lion's Mane** Pure white cluster of icicle-like teeth, often found on beech and birch in the wild. When cooked, they have a consistency similar to crab meat. Naturally fruits during cooler months. Due to a slower colonization rate, a higher inoculation rate should be used. Can be grown on many different hardwood species, large- or small-diameter logs.

L612A *100 plugs, $16.50* ***L612B*** *500 plugs, $33.00*
612C *Sawdust Spawn, $25.00* ***L612D*** *Plug Kit, $30.00*
612E *Countertop Kit, $28.00*

Laetiporus sulphureus **Chicken of the Woods** Large bright orange fruit bodies have a texture reminiscent of chicken. Great in soups and stir-fries. Fruits all season from late spring into late fall. Prefers large-diameter oak logs. For success with sawdust spawn, we recommend heat-treating and incubating log segments in **XL Filter Patch Bags** (not needed for plug spawn).

L613A *100 plugs, $16.50* ***L613B*** *500 plugs, $33.00*
613C *Sawdust Spawn, $25.00*

Lentinula edodes **Shiitake** Brown umbrella-shaped spongy caps, very nutritious and medicinal. Good for drying and reconstituting in winter soups. Meaty texture when cooked. Grows best on oak and hard maples. Fruits throughout the growing season and responds well to commercial forced-fruiting production methods. This is the Wide Range Shiitake strain.



L614A *100 plugs, $16.50*
L614B *500 plugs, $33.00*
614C *Sawdust Spawn, $25.00*
L614D *Plug Kit, $30.00*
612E *Countertop Kit, $28.00*

Pholiota nameko **Nameko** Gelatinous orange-to-amber caps thicken soups and are popular in Japanese cuisine. Fruity earthy aroma pairs well with dark green veggies, red meat and miso soup. Produces in the cooler temperatures of fall. Grows on oak, aspen, maple and other hardwoods. If planted in beds, use fresh hardwood chips.

L615A *100 plugs, $16.50* ***L615B*** *500 plugs, $33.00*
615C *Sawdust Spawn, $25.00*

Pleurotus **spp. Oyster Mushrooms** grow well on many different hardwood logs; soft hardwoods (poplar, aspen, cottonwood) are best. All three oyster species can also be grown in outdoor beds; they prefer straw to denser wood chips.

P. citrinopileatus **Golden Oyster** Tropical oyster strain that thrives in warm weather. Produces beautiful clusters with yellow caps that are a favorite at farmers markets.

L616A *100 plugs, $16.50* ***L616B*** *500 plugs, $33.00*
616C *Sawdust Spawn, $25.00* ***L616D*** *Plug Kit, $30.00*
616E *Countertop Kit, $28.00*

P. ostreatus **Blue Oyster** Also called **Grey Oyster**. Very popular fleshy firm edible grey-white oyster-shaped caps often found growing on old dying maple trees. Our most productive oyster strain. Reliable and cold tolerant, fruits prolifically in early spring or late fall.

L617A *100 plugs, $16.50* ***L617B*** *500 plugs, $33.00*
617C *Sawdust Spawn, $25.00* ***L617D*** *Plug Kit, $30.00*
617E *Countertop Kit, $28.00*

P. pulmonarius **Italian Oyster** Clusters of tender brown caps with thick white stems. Considered to be one of the finest culinary oyster mushrooms.

L618A *100 plugs, $16.50* ***L618B*** *500 plugs, $33.00*
618C *Sawdust Spawn, $25.00* ***L618D*** *Plug Kit, $30.00*

Stropharia rugosoannulata **Wine Cap** Vigorous red-capped fruiting bodies for growing in outdoor beds. Prefers hardwood chips but will grow on a mix of soft and hard. Once established, they will produce for several years and can be easily transplanted to fresh woody debris.

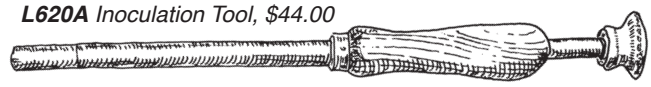
619C *Sawdust Spawn, $25.00*

Mushroom-growing Tools

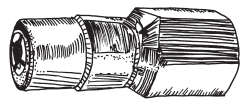
For log inoculation, you'll need some tools. Here are a few essentials to get you started:

Inoculation Tool A simple hand tool for rapid inoculation of hardwood logs with sawdust spawn. (Not needed for plug spawn.) Use with 12mm drill bit holes for best results.

L620A *Inoculation Tool, $44.00*



Angle Grinder Adapter Used to attach a drill bit to an angle grinder to increase speed on large projects. Fits 5/8" spindle and takes both 12mm and 8.5mm drill bits.

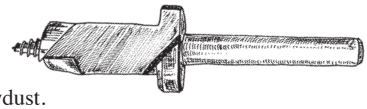


L621A *Angle Grinder Adapter, $55.00*

Low-Speed 5/16" Drill Bit For small-scale plug-spawn projects.

L622A *Low-Speed 5/16" Drill Bit, $7.00*

High-Speed Drill Bits Specifically made for log inoculation, designed to clear the hole of sawdust as it drills to a set depth that matches plug length or sawdust dosage. For large projects, we recommend an angle grinder adapter with an 8.5mm bit for plug spawn or a 12mm bit for sawdust.

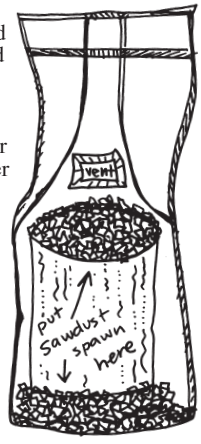


L623A *8.5 mm High-Speed Drill Bit with Stop Collar, $22.00*
L624A *12 mm High-Speed Drill Bit with Stop Collar, $22.00*

Sealing Wax A clear food-grade paraffin wax ideal for sealing holes in inoculated logs. One pound of wax is enough to seal about ten 4'-long logs. Sealing the holes is critical to success because it protects the spawn from drying out and from contamination. Wax is in granular form.

L625A *Sealing Wax, 1 lb, $6.00*

XL Filter Patch Bags Chicken of the Woods and Hen of the Woods are prone to being out-competed by other fungi. This makes them unreliable producers. For these two varieties, we strongly recommend heat-treating and incubating your logs in filter-patch bags to provide a blank slate for your desired species. Each bag fits a 1'-long, 8"-diameter log segment. One bag of **Sawdust Spawn** will inoculate about 10 log segments—you'll need one bag per segment. The 5-micron filter allows for ample gas exchange. More detailed instructions for heat-treating logs will come with your order. Bag is 3mil thick polypropylene, 10x5x24". Pack of 10 bags.



L626A *XL Filter Patch Bags, package of 10, $20.00*

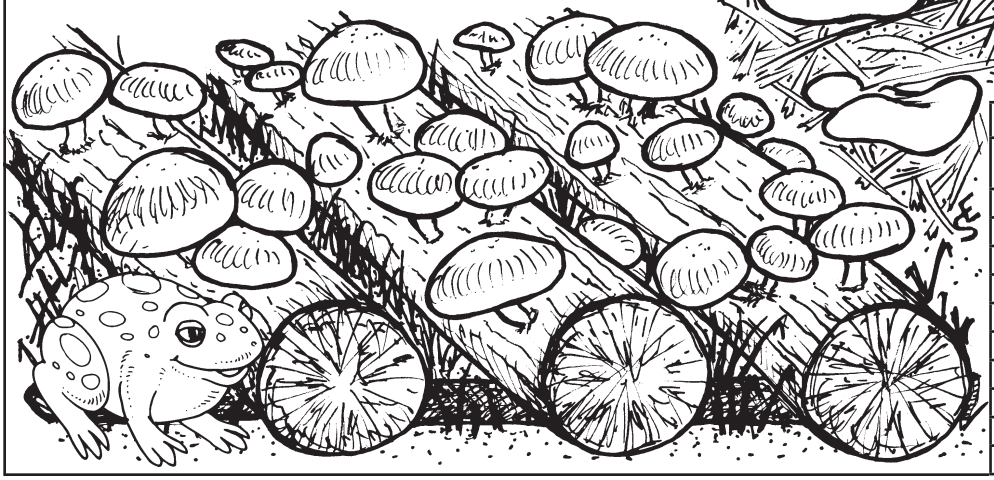
Growing Mushrooms

Log method Drill holes in logs, insert plug spawn or sawdust spawn, then seal with wax. Tools are listed on the previous page. Be sure to choose an appropriate tree species for the mushroom (see variety descriptions.) We offer these options for log inoculation:

• **Plug Spawn** 50 plugs will inoculate a single 4' long, 4" diameter log. Drill 5/16" holes (or 8.5mm with angle-grinder adapter) into your log, hammer in the plugs and seal the holes with wax. Plugs are an excellent choice for beginners. **Plugs come in bags of 100 or 500.**

• **Sawdust Spawn** Each bag contains 5½ lbs of hardwood sawdust colonized by mushroom mycelium, enough for about 25 logs. Drill 12mm holes in your logs, pack the sawdust using an inoculation tool and seal with wax. Good for commercial mushroom growers.

Outdoor Bed method Some varieties can be grown in non-sterile outdoor beds of fresh wood chips, sawdust, straw or other organic matter. Plant them under orchard trees or in your garden paths! Layer **Sawdust Spawn** with your growing medium, and keep beds watered. One 5½-lb bag of sawdust spawn will inoculate a 4x4' bed. Once established, a well-maintained bed can produce for many seasons.



Growing methods		
Mushroom type	**Log method**	**Bed method**
Almond Agaricus		X
Hen of the Woods	X	
Lion's Mane	X	
Chicken of the Woods	X	
Shiitake	X	
Nameko	X	X
Golden Oyster	X	X
Blue Oyster	X	X
Italian Oyster	X	X
Wine Cap		X

Herbaceous Perennial Plants

USDA hardiness zone (chart on page 71) follows each description. All our plants are nursery propagated. They are not dug from the wild! **All plant stock is bare root unless otherwise noted.**

Organic after item name means the plants were grown at Ripley Farm, a MOFGA-certified organic nursery in Dover-Foxcroft, ME.

***Achillea millefolium* Yarrow** Blooms June through September featuring 2–3" flat-topped flowerheads. Ferny green foliage is aromatic when crushed. Excellent filler for fresh and dried arrangements. Prompt removal of faded flowerheads guarantees a long season of blooms. Colors can fade out in extreme humidity but regular cutting will keep the blooms looking bright and fresh. It's a sweet and easy early morning task to walk the yarrow path and cut quick bouquets. Plant 12–24" apart in well-drained soil, full sun to part shade. (For white yarrow, see page 63.) Z3.

***A. m.* 'Oertel's Rose'** 12–15" tall. Deep rose-pink flower clusters. One of the most well-behaved yarrows we've seen in the garden—not messy or floppy in windy weather like some of the taller varieties. (2¼" plug stock)

L675 ***A**: 1 for $4.75*
***B**: 3 for $15.25*
***C**: 6 for $29.00*

***A. m.* 'Paprika'** 18–36" tall. Handsome bright red flowerheads. Each tiny blossom within the cluster has a sunny yellow center. Draws a crowd when we have friends over for barbecue. (2¼" plug stock)

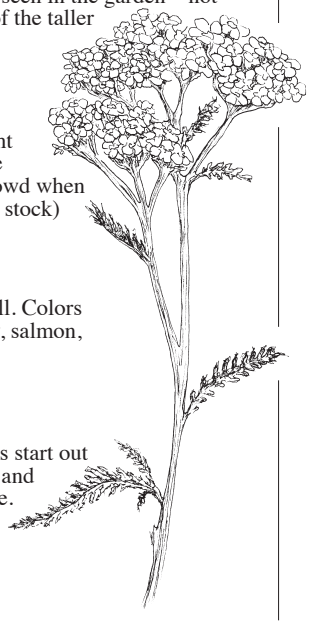
L676 ***A**: 1 for $4.75*
***B**: 3 for $15.25*
***C**: 6 for $29.00*

***A. m.* 'Summer Pastels' - Organic** 24" tall. Colors include soft shades of pink, red, white, yellow, salmon, orange, mauve and lavender. **ME Grown.**

L677 ***A**: 1 for $7.75*
***B**: 2 for $13.50*
***C**: 3 for $18.25*

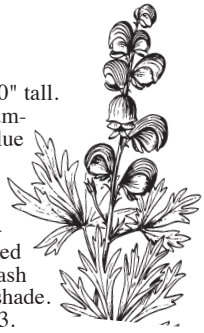
***A. m.* 'Terra Cotta'** 18–36" tall. Flowerheads start out dusky peachy-apricot with yellow undertones and gradually mature to a stunning coppery-bronze. One of our favorites! (2¼" plug stock)

L678 ***A**: 1 for $4.75*
***B**: 3 for $15.25*
***C**: 6 for $29.00*



***Aconitum napellus* English Monkshood** 36–40" tall. Also called **Friar's Cap**. Produces a mass of late-summer blooms with dense showy spikes of dark violet-blue helmet-shaped flowers above elegant palmate foliage in late summer. Grand delphinium-style blooms rarely need staking. An excellent cutflower—cut when 1/3 to 1/2 the spike is in bloom. We love watching bumblebees disappear under the hood then clamber out covered in pollen. *Caution: the entire plant is poisonous*; wash your hands after handling or cutting. Prefers partial shade. Plant 15–20" apart in moist soil. Native to Europe. Z3.

L679 ***A**: 3 for $9.25* ***B**: 6 for $15.75* ***C**: 12 for $28.50*



***Alcea* Hollyhock** 5–6' tall. Classic towering spires covered with disc-shaped blossoms for extended bloom from June to October. This year we're offering all first-year–flowering cultivars that are truly perennial, not biennial like most Alceas on the market. Cut plants back to 12" after flowering has finished to encourage root growth. Plant 12" apart in moist well-drained soil. Native to China. *Supplies may be limited, so order early to avoid disappointment!* Z3. (2½" plug stock)

***A. ficifolia* 'Las Vegas' Singles Mix** Remarkable fig-leaved hollyhock displays single flowers in a foxy range of colors from chestnut-brown to red, pink to white, and yellow to copper.

L680 ***A**: 1 for $5.50*
***B**: 3 for $14.00*
***C**: 6 for $25.00*

***A. rosea* 'Black Knight'** A single dusky midnight-purple beauty with a watchful yellow eye.

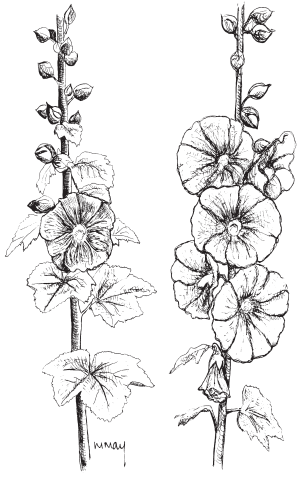
L681 ***A**: 1 for $5.50*
***B**: 3 for $14.00*
***C**: 6 for $25.00*

***A. r.* 'Halo Cerise'** Large single cerise-pink flowers with deep purple centers.

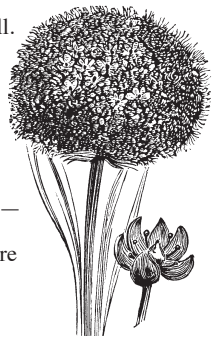
L682 ***A**: 1 for $5.50*
***B**: 3 for $14.00*
***C**: 6 for $25.00*

***A. r.* 'Sunshine'** Classic single happy yellow hollyhocks.

L683 ***A**: 1 for $5.50*
***B**: 3 for $14.00*
***C**: 6 for $25.00*



***Allium* 'Millennium' Flowering Onion** 15–20" tall. A profusion of cute round 2" rosy-purple flowers on sturdy stems above compact upright clumps of strappy glossy green foliage. Sweet-scented blooms make great cutflowers or dried winter arrangements whether you cut them before or after the green seed pods form. Attracts beneficial insects with its sweet nectar yet repels an array of undesirables—slithery, winged and legged pests alike—including deer. Only if crushed will the plants smell like an onion. Adds rugged charm and vertical structure to herb and rock gardens. Z4.

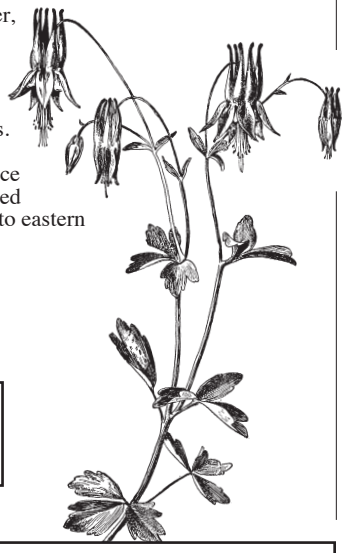


L684 ***A**: 1 for $8.75*
***B**: 3 for $22.00*
***C**: 6 for $39.00*

***Amsonia tabernaemontana* var. *salicifolia* Willow-leaf Bluestar - Organic** 30" tall. Clusters of deep blue pointed flower buds form and open into powder-blue star-shaped florets held above deep green fine grassy willow-like foliage. Blooms in early June in northern Maine. Gorgeous foliage turns gold in the fall. Best planted en masse. Forms a handsome vase shape at maturity. Looks fabulous with catmint and irises. Prefers moist woodland slopes. Adaptable to most garden environments but performs best in full sun to part shade. Plant 12–18" apart in moist slightly acidic soil. Native from Illinois south to Texas. Z3. **ME Grown.**

L685 ***A**: 1 for $7.75*
***B**: 3 for $20.25*
***C**: 6 for $36.50*

***Aquilegia canadensis* Wild Columbine - Organic** 12–24" tall. Delightful little stacks of round-lobed leaves emerge in early spring. Soon after, magical jewel-like nodding blossoms with red-spurred sepals and yellow petaled skirts dance above the foliage. The elegant slender spurs are filled with nectar irresistible to hummingbirds. Blooms from late May to early June. Prefers light moist well-drained soil. Nice planted in clusters, 12–18" apart. Dappled shade guarantees the best color. Native to eastern North America. Z3. **ME Grown.**



L686 ***A**: 1 for $7.75*
***B**: 3 for $20.25*
***C**: 6 for $36.50*

Organic after item name means the plants were grown at Ripley Farm, a MOFGA-certified organic nursery in Dover-Foxcroft, ME.

Planting Guide for Bare-root Perennials

To receive our guarantee (see page 2) for items on pages 55 to 66, you must have followed these instructions:

When you receive your order, open the bags and check the plant stock immediately. Roots and crowns should be firm and pliable, not soft or brittle.

After danger of freezing has passed:

- Dig a hole 2 or 3 times bigger than the plant stock.
- Add a little compost if needed.
- Fan or spread out the roots to encourage root development.
- Fill hole with soil, pressing out air pockets as you go.
- Keep the planting area free of weeds.
- Mulch *around* the crown with straw or woodchips.
- Avoid applying mulch directly on top of crowns as they could rot.
- Mark the location with a plant label.
- Check your plants daily in the first 2 weeks after planting!

If you cannot plant right away, you have two options:

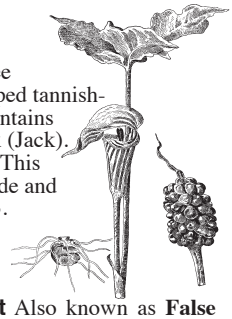
1. Store bags of bare-root plants in a dark and cool (35–40°) place.

2. Pot up plants in well-drained slightly moist potting mix. Avoid coiling the roots in the bottom of undersized containers. Set pots in a protected spot in part-shade until you're ready to plant.

You must protect your herbacious perennials from:

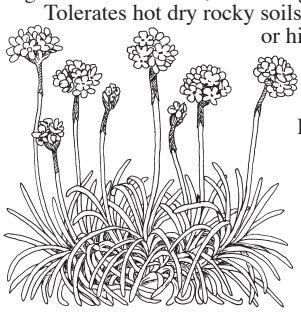
- Freezing
- Sun-shock in the first 2 weeks
- Long periods of cold and wet conditions
- Too much or too little water
- Absentee gardening!

***Arisaema triphyllum* Jack-in-the-Pulpit** 12–24" tall. In midspring, one or two compound leaves appear close to the ground, each with three leaflets framing an upright stem topped by a striped tannish-purple 3" long cuplike spathe (the pulpit) that contains and arches over the erect greenish-yellow spadix (Jack). It's always a delight to lift the flap and see Jack. This magical Northeastern native prefers dappled shade and moist rich woodland soil. Plant 10–18" apart. Z3.



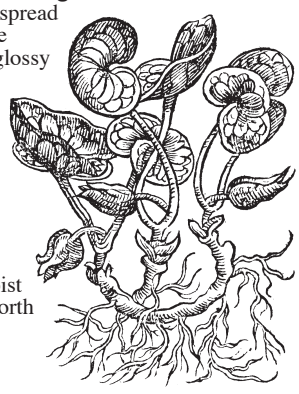
L687 ***A**: 1 for $7.25*
***B**: 3 for $18.25*
***C**: 6 for $33.00*

***Armeria maritima* 'Splendens' Sea Thrift** Also known as **False Sea Pink**. 8–10" tall. Bright carmine-rose ball-shaped flowers bloom all spring on long lanky leafless stalks held above tight mounds of silvery evergreen grassy foliage. Makes a tidy clump in the rock garden or container, but also great planted en masse as a groundcover. Tolerates hot dry rocky soils and grows beautifully along the coastline or highway where few other garden plants can tolerate high salt concentrations. Shear faded flowerheads for attractive little clumps of foliage throughout the season. Resents being moved—choose a spot near the front your garden and leave it there. Prefers full sun. Requires well-drained soil. Plant 8–12" apart. Light loose winter mulch recommended. Species native to mountains and coastal regions of the northern hemisphere. Z3. (2" plug stock)



L688 ***A**: 1 for $7.50*
***B**: 2 for $13.00*
***C**: 3 for $17.55*

***Asarum canadense* Canadian Wild Ginger** 6–12" tall. Heart-shaped leaves up to 7" wide will spread into a beautiful groundcover. Leaves are large and slightly fuzzy, not small and glossy like the European species. Aromatic roots used like other gingers for their warming qualities and for soothing indigestion, coughs, colds and motion sickness. The small reddish-brown urn-shaped flowers grow near the soil surface or in the surface leaf mold, pollinated by crawling insects. Flowers are fun to search for but won't decorate your landscape. Requires shade and moist rich woodland soil. Native to eastern North America. Z3. (2½" plugs in pots)

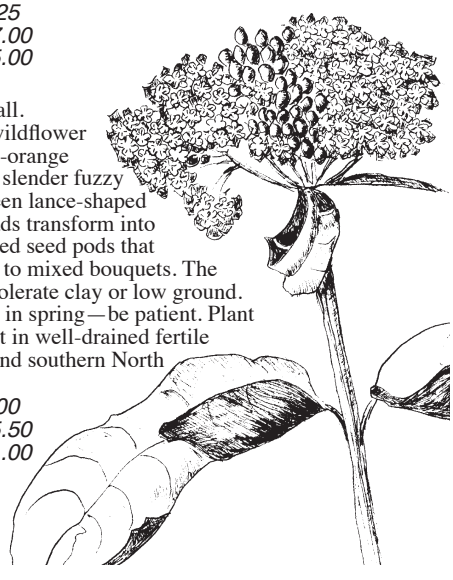


L689 ***A**: 3 for $18.00*
***B**: 6 for $30.00*
***C**: 12 for $54.00*

***Asclepias incarnata* Swamp Red Milkweed - Organic** 5' tall. Forms unique fragrant flat-topped clusters of upturned rosy red flowers. Willow-like leaves are 4–5" long. Clump-forming; great for naturalizing. Attracts bees, butterflies and hummingbirds. Grows naturally in floodplains and wet meadows. Plant 18–36" apart in moist soil. Native to North America. Z3. **ME Grown.**

L690 ***A**: 1 for $9.25*
***B**: 2 for $17.00*
***C**: 3 for $25.00*

Asclepias tuberosa
Butterfly Weed 24" tall. This brilliant summer wildflower features vivid tangerine-orange clusters of flowers atop slender fuzzy stems, covered with green lance-shaped leaves. Spent flowerheads transform into prominent spindle-shaped seed pods that make a unique addition to mixed bouquets. The fleshy taproot will not tolerate clay or low ground. The very last to emerge in spring—be patient. Plant in full sun, 18–24" apart in well-drained fertile soil. Native to eastern and southern North America. Z4.



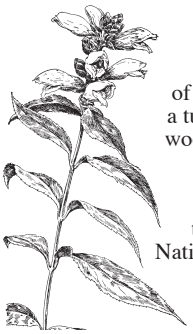
L691 ***A**: 1 for $9.00*
***B**: 2 for $15.50*
***C**: 3 for $21.00*

Baptisia australis **Blue False Indigo** 3–4' x same. An early summer stand-out with vibrant blue lupine-like flowers. Nitrogen-fixing legume transfers nitrogen from the air to the soil where it can be absorbed by neighboring plants. Has a bushy habit and shrub-like structure once mature. Seed pods turn black in fall, adding interest to the autumn landscape. Will develop an extensive root system, good for holding slopes to prevent erosion. Plant 3' apart in full sun and well-drained acid soil. Native to central and eastern North America. Z3.

L692 ***A****: 1 for $8.50*
B*: 3 for $22.00*
C*: 6 for $39.25*

Campanula rotundifolia **Scotch Bellflower - Organic** 12" tall. Also called Harebell. Delicate papery lavender-blue bells nod on slender curved stems. Blooms June through September. Surprisingly drought-tolerant plants thrive in dry gravelly soil, but they certainly won't complain about moist well-drained soil. Plant in full to part sun, 12–18" apart. Native to locations around the northern hemisphere, including North America. Z2. **ME Grown.**

L693 ***A****: 1 for $7.50*
B*: 3 for $18.75*
C*: 6 for $33.00*



Chelone obliqua **Turtlehead** 2–3' tall. Boldly veined deep-green leaves topped by elegant spikes of pink hooded flowers that are shaped very much like a turtle's head. Try planting en masse at the mouth of a woodland path. Deer avoid the bitter foliage. Perfect in moist woods or at the water's edge—these pleasing late-season flowers will flourish in a wide range of soils, from clay to sandy, as long as they're not waterlogged. Plant about 12" apart in dappled sunlight. Native to North America. Z4.

L694 ***A****: 1 for $5.75*
B*: 3 for $15.00*
C*: 6 for $26.75*

Coreopsis palmata **Prairie Coreopsis - Organic** 2' tall. Also called **Stiff Coreopsis** or **Tickseed**. Sunny yellow flowers held above stiff stems will attract scads of honeybees. This practical prairie plant forms dense mats of underground rhizomes that can help stabilize hot dry slopes. Plant in full sun, in well-drained dry gravelly soil. Blooms June-July. Deadhead flowers to encourage a second bloom. Native to central U.S. Z3. **ME Grown.**

L695 ***A****: 1 for $6.50*
B*: 2 for $11.25*
C*: 3 for $15.25*

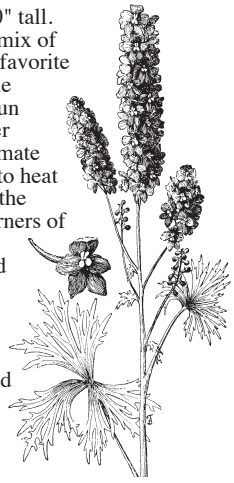
Cornus canadensis **Bunchberry** 3–8" tall. Every year in June I sneak into a secret stand of cedars in the cool woods of Piscataquis County to peek at a magic carpet of wild bunchberries. The dark woods are cast alight with the creamy-white miniature dogwood flowers held above olive-green whorls of six pointy oval leaves. In late summer clusters of edible scarlet berries form and attract songbirds, chipmunks, mice, squirrels and all the other foraging beasts in our great North woods. Best planted en masse in cool damp acidic woodland soil. Native to northern North America. Nursery propagated. Z2. (2¾" plug stock)

L696 ***A****: 1 for $12.50*
B*: 3 for $32.25*
C*: 6 for $58.00*

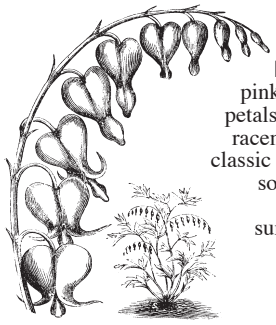
2005: Fedco decides to answer the telephone.

Bunk: For over 25 years Fedco avoided all phone contact with customers. It was seen as a distraction and a waste of time and money. Some at Fedco wanted to publish a phone number while others were passionately against it. But customers wanted to talk to us and finally they won out. In 2005 we published the Fedco phone number for the first time in the Tree catalog.

Delphinium **New Millennium Stars Mix** 60" tall. You'll receive one each from this hybrid series mix of first-year–flowering delphiniums, featuring our favorite cultivars—Blue Lace, Cobalt Dreams and Purple Passion, (or some other fabulous variety if we run out of those). Elegant cylindrical terminal flower spikes rise 3–6' above waist-high clumps of palmate glossy green foliage. Considered more tolerant to heat and humidity than many standard cultivars, yet the New Millenniums also thrive in super-chilly corners of the world with reports of successful perennial plantings in Alaska and Canada. Avoid overhead watering to prevent disease. Light mulch is recommended to keep the roots cool and moist. Side-dress regularly with compost during the second growing season for years of robust blooms. Plant 36" apart in highly fertile non-acid loam. Light shade is best, but full sun is fine. Z3. (2" plug stock.)



L697 ***A****: 1 for $6.50*
B*: 2 for $11.50*
C*: 3 for $15.50*



Dicentra spectabilis **Old-Fashioned Bleeding Heart** 30–36" tall. Perfectly formed pink heart-shaped flowers with delicate white inner petals dangle like charms on bracelets along graceful racemes above attractive clumps of cut foliage. This classic hardy long-lived perennial thrives in rich moist soil and partial shade. Plant 2–4" deep, 24" apart. Blooms in early to mid spring, goes dormant in summer. Native to eastern Asia. Z3.

L698 ***A****: 1 for $4.50*
B*: 3 for $11.75*
C*: 6 for $22.00*

Digitalis purpurea **Foxglove** Delightful tubular bell-shaped flowers with veined and spotted throats form along stately spires above basal rosettes of deep green velvet foliage. Flowers June through August. Good for cutting or the naturalized border. A must-have in every cottage garden. This year's offerings are both considered perennial but are best treated as biennials. Spread out the seedlings as they appear and a glorious patch will result in a few years. Plant 12–24" apart in moist slightly acid soil in full sun to part shade. Native to Europe. *Caution: all parts of the plant are poisonous*; wash hands after handling. Z3. (2½" plug stock)

D. p. **'Dalmation Crème'** 16–20" tall. Dreamy creamy butter-yellow flowers with maroon-spotted throats.

L699 ***A****: 1 for $4.50*
B*: 3 for $11.75*
C*: 6 for $22.00*

D. p. **'Dalmation Peach'** 2–3' tall. Elegant peachy-yellow blossoms with orange speckled throats. Soft and subtle beauty.

L700 ***A****: 1 for $4.50*
B*: 3 for $11.75*
C*: 6 for $22.00*

Eutrochium maculatum **Spotted Joe Pye Weed - Organic** 4–7' tall. If there were a Best in Show competition for native wildflowers, this one would take the cake for character. Considerable deep-green toothed and lance-shaped leaves whorl in sets of five around sturdy unbranched bewhiskered purple-spotted stems. Whimsical flat-topped terminal flower clusters with feathery lavender-rose disc florets dance on top. Blooms take the stage in mid-July and perform well into August, attracting a plethora of pollinators. Blossoms mature into soft tawny seed clusters that add unique interest to the winter landscape. Readily spreads from seed and underground rhizomes, so plant it thoughtfully if you are working in a small space. Prefers full sun and rich moist soils. Native to eastern North America. Z4. **ME Grown.**

L701 ***A****: 1 for $6.50*
B*: 2 for $11.25*
C*: 3 for $15.25*

Ferns are flowerless spore-producing perennials, represented by more than 10,000 species worldwide, ranging from 70' tropical tree ferns to teensy plants sprouting from cracks in alpine rock. In Maine we enjoy lush fern displays all summer on the roadsides and in the woods. Ferns make wonderful low-maintenance foliage plants that thrive in woodsy humus-rich soil and lend a serene aura to a shady garden or landscape. Mulch with 2" of leaves if necessary to keep crowns from drying out.

Adiantum pedatum **Maidenhair Fern** 10–12" tall. Also known as **Eastern Maidenhair Fern**. Delicate whorled form makes it one of my favorites. Glossy black stems curve up and then droop toward the ground with more narrow black stems growing in elegant arches from the main stem. Tiny distinct ginkgo-like green leaves line every stem. Prefers partial shade and slightly alkaline soil. Plant 12" apart. Native to eastern North America. Z2.

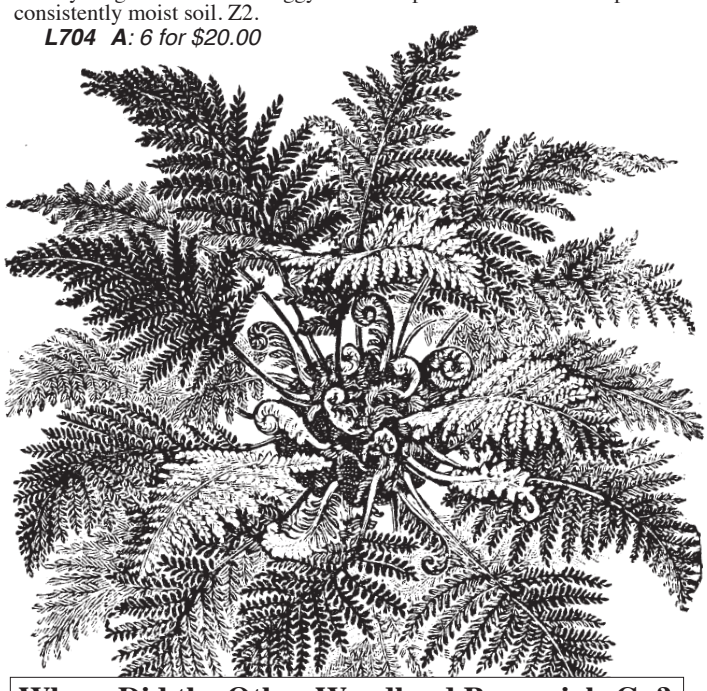
***L702 A**: 6 for $17.75*

Dryopteris marginalis **Leatherwood Fern** 24" tall. Also known as **Evergreen Wood Fern**. Strong sturdy stems and slightly glossy leathery grey-green fronds make this one of the best ferns for floral arrangements. In late spring it's great fun to look for immature sori (spore cases) on the underside of the frond. Hunt for small green bumps along the margins of the subleaflets. Later in the year, the sori changes color to rusty-brown. Evergreen leaves flourish through the winter and can be found in rocky wooded slopes in Canada, onwards south to Alabama and farther west to the Rocky Mountains. Performs best in less than 3 hours of sunlight per day but will tolerate more if you ask nicely. Plant 12" apart in moist well-drained woodland soil. Z3.

***L703 A**: 6 for $20.00*

Osmunda regalis **Royal Fern** Attains giant proportions! Soft and wavy deciduous lance-shaped light green fronds can reach 3' long. Sometimes called **Flowering Fern** because some of the fronds have brown spore cases on their tips that lend a decorative tassel-like appearance. One of the showiest garden ferns makes a great focal point at the waterside or in a woodland. Can reach up to 6' tall and spread to more than 9' wide at maturity. Evolutionarily speaking, *Osmunda* is one of the oldest plant genera, native to North and South America and Asia. Some Royal Fern individuals are said to be 1000 years old. Ours are much younger. Prefers wet boggy areas and part shade. Plant 18" apart in consistently moist soil. Z2.

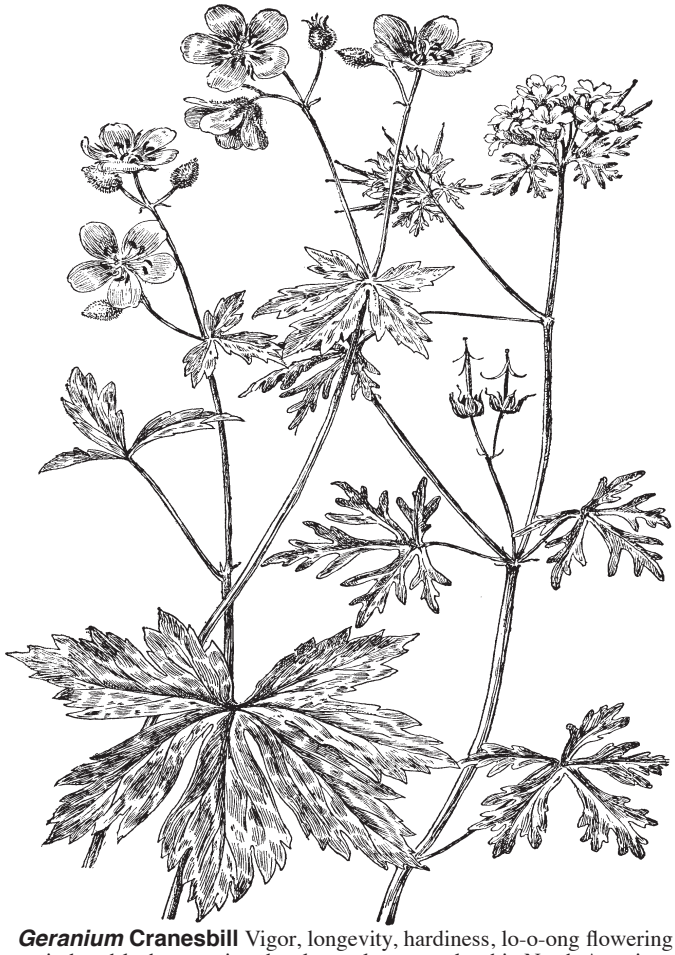
***L704 A**: 6 for $20.00*



Where Did the Other Woodland Perennials Go?

We've decided to temporarily discontinue offering goldenseal, trillium, bloodroot and Solomon's seal. It can be difficult to verify that the plants sourced in the nursery trade are seed-propagated in beds, and not dug from the wild. Although some woodland plants may have appeared abundant in the wild, their slow germination and growth habits rarely allow their reproduction to keep up with commercial demand. Many of these plants are now extinct or threatened in their native ranges because of commercial harvesting. We are working to build up a locally grown supply of these plants so we can bring them back to the catalog.

There are small specialty nurseries that source seeds in a way that doesn't harm wild populations of these rare and exquisite plants. Some of our favorites right here in Maine are Fernwood Nursery in Montville, and Rebel Hill Nursery in Liberty.



Geranium **Cranesbill** Vigor, longevity, hardiness, lo-o-ong flowering period and lush attractive deeply cut leaves make this North American native useful for borders, edging, rock gardens or as an orchard companion. After bloom, distinctive long narrow "cranesbill" seedpods flutter jauntily above the spreading foliage, which quickly forms dense clumps and turns a rich red in fall. Name confusion may be a big reason why this attractive easy-to-grow genus is not more well known: the popular bedding and indoor plant with big red flowers widely called geranium is actually *Pelargonium*. For best results plant in the lightly shaded areas of wild open woodland gardens or in the orchard underneath your ancient apple trees. Plant 12–18" apart in average garden soil. Z4.

G. cinereum **'Ballerina'** 6–12" tall. Elegant dainty pink flowers with reddish-purple veining and darker purple eyes. Compact grey-green foliage. Perfect in rock beds and for edging small gardens.

***L705 A**: 1 for $6.50*
***B**: 3 for $16.50*
***C**: 6 for $29.75*

G. maculatum **Spotted Cranesbill** 24" tall. Clusters of single 1¼" pinkish-lilac saucer-shaped flowers beckon the native pollinators. Also known as **Wild Geranium**, this is the true geranium, native to eastern North America. Low-growing spreading groundcover and the best choice for planting in the orchard.

***L706 A**: 3 for $7.50*
***B**: 6 for $13.00*
***C**: 12 for $24.00*

G. pratense **'Orion'** 20–24" tall. Clusters of single 1" sapphire-blue flowers with violet veins. Blooms continuously from late spring through fall, the first big flush of flowers arrives in late May, with a lighter repeat bloom cycle continuing well into autumn.

***L707 A**: 1 for $4.50*
***B**: 3 for $11.25*
***C**: 6 for $20.00*

2006: Fedco accepts online orders.
Bunk: Until now, it was all by mail. Online ordering has spelled the end of many paper catalogs, but the Fedco catalogs have hung in there, even as online ordering has become the preferred method of the majority of our customers.

***Helenium autumnale* Red & Gold Sneezeweed Mix - Organic** 4–5' tall. Supposedly used for snuff in earlier times, hence the common name. A rich and blazing scheme of bronze, brown, crimson and yellow for a vibrant end-of-summer display. Single flowers resemble coreopsis in shape but have a large center button much like a coneflower. Combine with asters and phlox for great late-season color. Not fussy, easy to grow, excellent cutflower, and at its prime when most perennials are done blooming. Plant 18" apart in full sun. Native to North America. Z3. **ME Grown.**

L708 ***A****: 1 for $6.75*
B*: 3 for $17.25*
C*: 6 for $31.00*

***Hemerocallis* Daylily** Champion low-maintenance perennial produces a bush of narrow arched leaves topped with lily-shaped flowers from July to September. *Hemerocallis* means 'beautiful day,' referring to the fact that each flower lasts only a day, but since each scape (or stem) is covered with buds, bloom periods can be extensive and the long stems work well in bouquets. Trouble-free, chokes out weeds. Flourishes under a wide range of conditions, from full sun to shade, wet to dry. Plant 12–18" apart in average soil; benefits from an annual shovel or two of compost. Native to eastern Asia. This year's stock is one-year-old field-grown rootstock with two fans. Z2.

***H.* 'Calico Jack'** 24" tall. Bright buttery-yellow 6" flowers with distinctive deep plum eyes and lightly ruffled plum edges. Semi-evergreen foliage. Tetraploid. Midsummer blooms.

L709 ***A****: 1 for $7.25* ***B****: 3 for $18.75* ***C****: 6 for $33.75*

***H.* 'Catcher in the Eye'** 30" tall. Lavender-purple flowers with a craggy dark purple eye, bright yellow throat and plum-lined picotee edge. This daylily is no phony—once established, expect up to 30 flowers per scape in early to midsummer.

L710 ***A****: 1 for $9.50* ***B****: 3 for $24.50* ***C****: 6 for $44.25*

***H.* 'Hyperion'** 30" tall. On dense foggy mornings, bright clear Hyperion peers through the gloom with intensely fragrant 5" trumpet-shaped lemon-yellow flowers. Widely planted on old farmsteads in Maine, where it became popular in the 1920s. Famous for its heavenly scent, extended blooms—flowers stay open for nearly 16 hours—and ability to rebloom later in the season. Hyperion remains a favorite and is a must-have in the naturalized perennial border. Midsummer blooms.

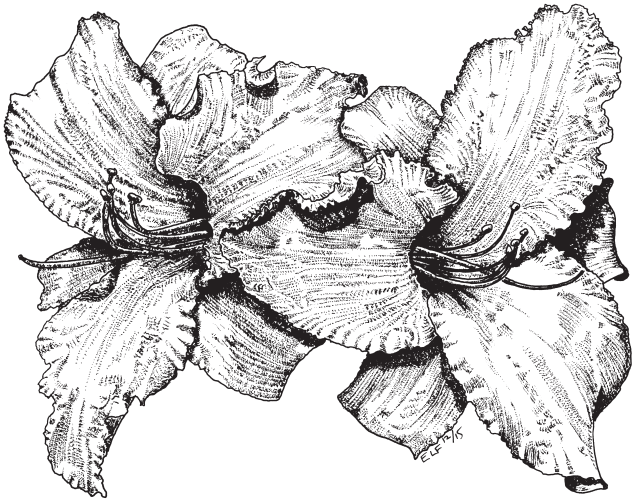
L711 ***A****: 3 for $13.75* ***B****: 6 for $24.75* ***C****: 12 for $45.00*

***H.* 'Little Business'** 12–15" tall. Dainty 3" dusky raspberry-red flowers with lime-green throats. Blooms and reblooms almost as much as the famous Stella de Oro! Excellent landscape plant, a vigorous multiplier and looks fabulous paired in bouquets with other small daylilies like Little Grapette and Siloam June Bug. Mid-late season blooms.

L712 ***A****: 1 for $5.50* ***B****: 3 for $14.00* ***C****: 6 for $25.25*

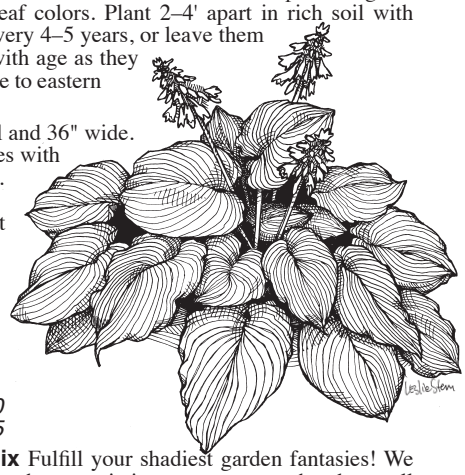
***H.* 'Simmons Overture'** 24" tall. Brighten up your foundation plantings with these giant 6" lavender-rose flowers with dark purple eye-zones, golden-yellow throats, and deep purple wriggly edges. Considered a "super-bloomer" with more than 300 flowers per season after three years in the ground. Throw some of these in with your old orange ditch lilies just to get your nosy neighbors' tongues wagging. Mid-late season blooms.

L713 ***A****: 1 for $7.75* ***B****: 3 for $19.85* ***C****: 6 for $35.75*



Hosta Bold foliage forms orderly mounds with dependable sprays of fragrant bell-shaped flowers on tall stalks. Valuable and cherished low-maintenance border plant provides shade-loving groundcover from spring to frost. With their varying colors, textures and clump sizes, hostas alone under trees can make a woodland garden. Hostas tolerate a wide range of soil conditions but need moisture. Those with blue and variegated leaves develop their best color in shade. Deep shade gives fewer flowers but better leaf colors. Plant 2–4' apart in rich soil with adequate humus. Divide every 4–5 years, or leave them alone; they will improve with age as they spread and establish. Native to eastern Asia. Z3.

***H.* 'Velvet Moon'** 24" tall and 36" wide. Bright golden-yellow leaves with striking dark green centers. We searched far and wide for an interesting hosta that grows well in both shade and full sun—we finally found it! A sport of the famous variety Abiqua Moonbeam. Lavender flowers.



L714 ***A****: 1 for $7.75*
B*: 2 for $13.50*
C*: 3 for $18.25*

Humongous Hostas Mix Fulfill your shadiest garden fantasies! We will choose six of the biggest hosta varieties we can get our hands on, all listed as "Giants," in a variety of solid blues, solid greens, dark margins with light centers, and light margins with dark centers. Size matters: will be no shorter than 30" tall and up to 80" wide at maturity. Each plant will be individually bagged and labeled by name.

L715 ***A****: 6 plants for $34.50*

***Iris sibirica* Siberian Iris** In late June, delicate flowers dance above tall slender slate-green foliage that looks good all summer. Tolerates most conditions, but performs best in rich moist acid soil. Plant 18" apart in full sun or partial shade. Give them room to spread, and divide clumps every few years. Z3.

***I. s.* 'Jewelled Crown'** 28–34" tall. Eye-catching 3–5" flowers with deep wine-purple standards and falls, and lighter blue-purple styles. Semi-flared falls display prominent white and yellow signals with purple veining. Formerly known as **Contrast in Styles**—different dopey name, same great iris.

L716 ***A****: 1 for $9.75*
B*: 3 for $25.50*

***I. s.* 'Miss Apple'** 30" tall. Bold magenta standards atop deep red falls with golden-yellow streaks. Sweet fragrance.

L717 ***A****: 1 for $6.00*
B*: 3 for $15.50*

***I. s.* 'Ruffled Velvet'** 24–30" tall. Exquisite velvety 4½" blossoms with unusual finely cut, fancily feathered dark saturated reddish-purple standards above plum-purple flared falls with a black-and-gold blaze. Vigorous long-blooming tetraploid. One of the best siberians in my garden. Introduced in 1973 by the famous and beloved Currier McEwen.

L718 ***A****: 1 for $7.75*
B*: 3 for $19.75*

***I. s.* 'Sunfisher'** 28" tall. Lemony yellow standards and deeper sunshine-yellow falls.

L719 ***A****: 1 for $7.75*
B*: 3 for $19.75*

2010: Clouds.
Bunk: In the summer of 2009 I became extremely ill. It was difficult to do my Fedco work but many people rallied around me as I went through several months of draconian treatment. I did have energy enough to draw the 2010 cover though I needed help. I wanted to have clouds in the sky and I knew [my daughter] Phoebe could draw anything. So, she drew the beautiful clouds and I drew the orchard below in the shape of the number 350. In the intro to the catalog, I wrote, "Most climate scientists believe that a 350 parts per million (ppm) concentration of carbon dioxide is the maximum our atmosphere can contain without causing irreversible runaway climate change. It could be the most important number of the 21st (or any) century." With all but a few of the world's leaders mired in a stew of their own greed, hatred and self-absorption, it's not looking good. Better plant that tree today!

***Iris versicolor* Northern Blue Flag** 30–36" tall. Northeastern native species carries gorgeous blue-violet flowers with bold purple veining and a white and lemon-yellow blaze. Tall slender blue-green arching lance-shaped leaves offer a strong vertical feature to the landscape. Requires consistently moist soil and prefers 2–4" of shallow standing water. Plant 12–24" apart in full sun to part shade. Early bloom time. Z2.

L720 ***A**: 3 for $14.00*
***B**: 6 for $24.25*
***C**: 12 for $43.75*

***Leucanthemum* x *superbum* 'Crazy Daisy' - Organic** 24" tall. Snow-white petals form fluffy double rings around a bright yellow disk. Starts blooming mid-July here in central Maine and with regular cutting will bloom into fall. Excellent choice for cutflowers. One of the easiest perennials to grow. Plant 12–18" apart in full sun to partial shade in well-drained soil. Z4. **ME Grown.**

L721 ***A**: 1 for $6.50*
***B**: 2 for $11.25*
***C**: 3 for $15.25*

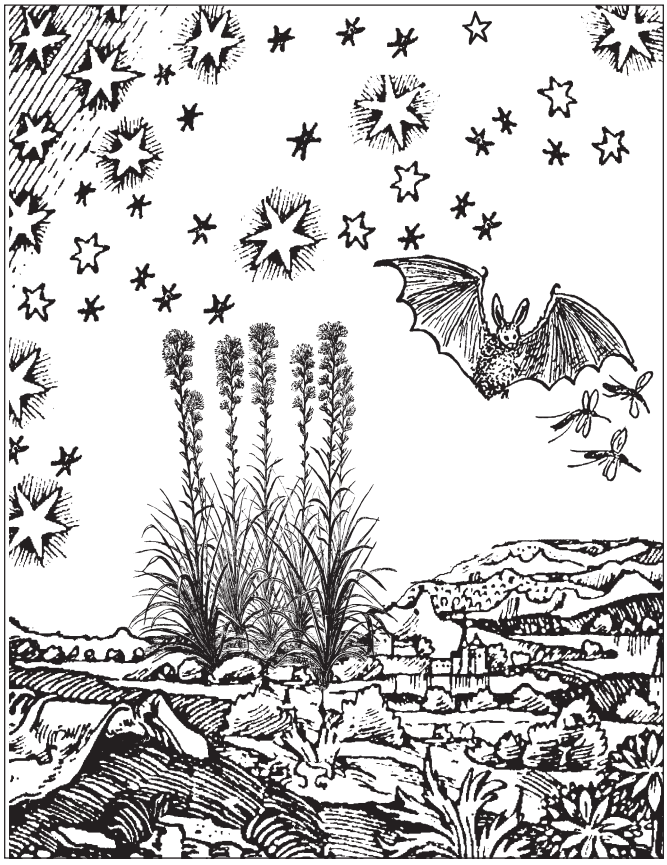
***Liatris spicata* Blazing Star** Also called **Gayfeather**. Stiff dense "bottlebrush" flower spikes tower above fine grass-like foliage. Adds elegant structure to the perennial border and mixed bouquets. For cutflowers be sure to leave at least 1/3 of the stem on each plant for best results. Blooms from July to September. Tolerates a broad range of growing conditions, but not drought. Plant in full sun, 3" deep, 8–12" apart, in well-drained fertile soil. Native to eastern North America. Z3. (1 1/4–1 1/2" corms)

***L. s.* Floristan White** Dreamy white flower wands grow 30–36" tall.

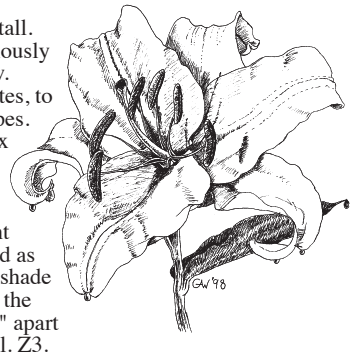
L722 ***A**: 10 for $6.00*
***B**: 20 for $10.25*
***C**: 50 for $23.00*

***L. s.* Purple Blazing Star** Magical magenta-purple flower wands grow 20–30" tall.

L723 ***A**: 10 for $3.50*
***B**: 20 for $6.00*
***C**: 50 for $13.50*

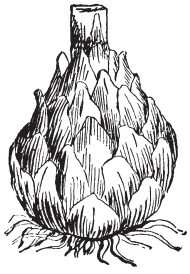


***Lilium* Oriental Lily Mix** 30–44" tall. Queen of the perennial border, fabulously showy and surprisingly easy to grow. Colors range from all-pinks, all-whites, to brilliant bicolors with spots and stripes. The five or more varieties in this mix of fragrant Oriental hybrids will draw a crowd to your garden in August. Great as cutflowers, or let them stand in display beds. Excellent as bedding plants or cutflowers, good as specimens or in solid masses. Light shade prolongs summer blooms and keeps the bulbs cool. Plant bulbs 6–8" deep, 6" apart in rich slightly acid well-drained soil. Z3.

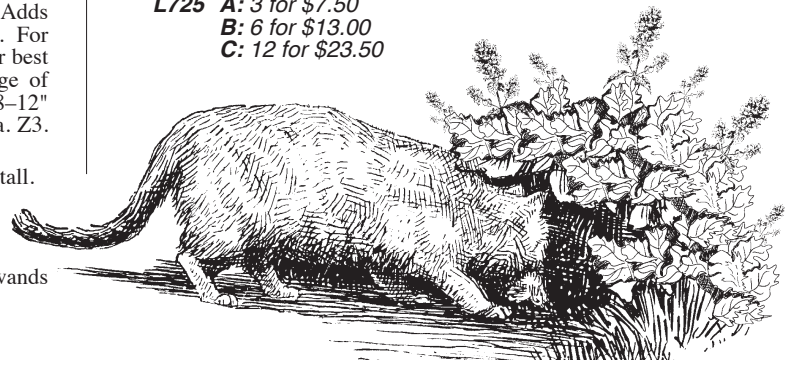


L724 ***A**: 3 for $11.25*
***B**: 6 for $18.00*
***C**: 12 for $32.50*

***L. tigrinum* 'Citronelle' Tiger Lily** 2–5' tall. Robust variety produces scads of luminous lemon-yellow flowers with recurved petals generously flecked with dark purple dots. Prominent rusty-red anthers produce a beautiful mahogany pollen. Tiger lilies are distinguished by purplish-black bulbils in the leaf axils along the stem. When the plant is happy, the bulbils will drop and sprout baby lilies by the score. Z2.



L725 ***A:** 3 for $7.50*
***B:** 6 for $13.00*
***C:** 12 for $23.50*



***Nepeta faassenii* 'Walker's Low' Catmint** 2–3' tall, despite its name. Aromatic grey-green foliage with long arching stems topped by lavender-blue flowers provides an eye-catching show of color nearly all summer. Creates a strong dependable low-growing hedge along any garden path. Flowers attract bees, butterflies, hummingbirds and human admiration. 2007 Perennial Plant of the Year. Cut back in midsummer to encourage steady blooms. Likes hot and dry, but will grow in any well-drained soil. Plant 18–24" apart in full sun to part shade. Z3.

L726 ***A**: 1 for $9.25* ***B**: 2 for $15.95* ***C**: 3 for $21.50*

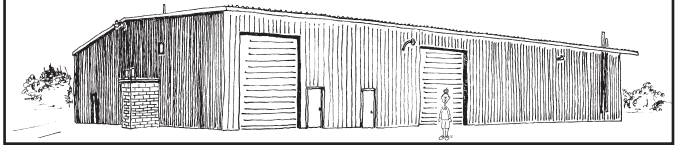
***Oligoneuron rigidum* Stiff Goldenrod - Organic** 2–5' tall. Also called **Rigida**. Formerly classified as a member of the *Solidago* genus and recently reclassified as an *Oligoneuron*. Grower Gene Ripley said it best: "Rigida displays the gorgeous yellow-gold vibrancy of goldenrod, but packed into a dense, showy, flat-topped cluster, with attractive lush slate-green foliage that you'd never recognize as a goldenrod. The pollinators absolutely love it, like all goldenrods, but Rigida draws them in without looking weedy or common. My favorite kind of plant: a native pollinator magnet that holds its own in the garden on looks alone!" Excellent cutflower. Plant in full sun to part shade in rich well-drained soil. Native to eastern North America. Z3. **ME Grown.**

L727 ***A**: 1 for $6.75* ***B**: 2 for $12.50* ***C**: 3 for $16.50*

2011: Fedco Trees moves into its first non-barn.

Bunk: Fedco was growing and Trees had outgrown the chicken-barn basement. We decided to purchase a former construction company warehouse about a mile away. More space, easy access to the highway and good office facilities.

In September Fedco staffer Laura Childs took me on an afternoon of fruit exploring in Belgrade. It was a life-changing day of discovery, largely centered around one of Maine's most important historical apple people, 19th-c. orchardist, Joseph Taylor. [See page 12.]



***Paeonia* Itoh Peony** Also known as **Intersectional Hybrid Peonies**, these wonders are a cross between herbaceous garden peonies and tree peonies and feature the best of both. Giant 6–9" blossoms (like the ones on tree peonies) open just after the garden peonies have faded. The growth habit is similar to garden peonies with attractive mounded foliage that dies back in the winter. But do not cut Itoh peonies down the ground in the fall—next year's buds need room to develop on the lower stems. Leave at least 6" of hardwood stems above the ground.

Named for Toichi Itoh, the Japanese hybridizer who supposedly made thousands of attempts to cross garden and tree peonies. He finally succeeded in 1948 but did not live to see his seedlings bloom. In the 1970s Toichi's widow gave an American breeder permission to introduce Itoh peonies to the West, where hybridizers took up the intersectional torch.

Full planting and pruning instructions will be included with your order. Z3. (Stock has 3–5 eyes.)

***Paeonia* (Itoh) x 'Bartzella'** 30–36" tall. Fragrant 6" semi-double lemon-yellow flower with red flames at the center. Blossoms can display as fully double on occasion.

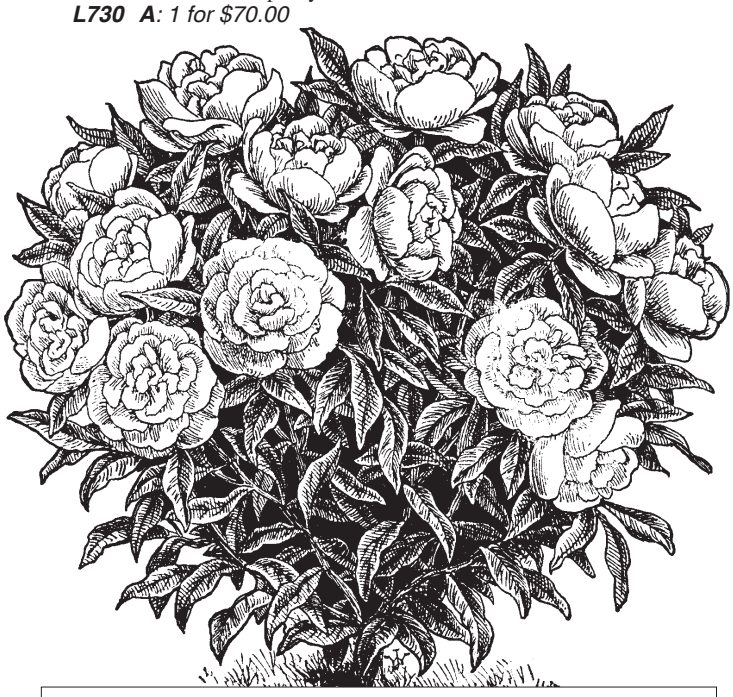
L728* *A: 1 for $30.00

***Paeonia* (Itoh) x 'Julia Rose'** 30–36" tall. Cherry-red buds open to 8" fragrant semi-double orange-apricot-pink flowers with subtle purple edging. Blossoms eventually fade to yellow. All five colors can be seen on one plant at the same time.

L729* *A: 1 for $46.00

***Paeonia* (Itoh) x 'Morning Lilac'** 25–30" tall. Fragrant 9" single to semi-double flowers are light lilac-fuchsia-purple with occasional white splashes. There are reports that the bloom period can last as long as 6 weeks. Wouldn't that be pretty!

L730* *A: 1 for $70.00



Staff reading picks

Read your Fedco Trees catalog cover to cover? Memorized our Seeds & Supplies catalog, too? Here are recommendations to help you through winter. (For John Bunker's apple reading recommendations, see page 14.)

Beyond the War on Invasive Species by Toa Orion

Finding the Mother Tree: Discovering the Wisdom of the Forest by Suzanne Simard

Iwígara: American Indian Ethnobotanical Traditions and Science by Enrique Salmón

Malus: A quarterly print zine featuring essays, cider criticism, poetry & art (maluszine.com)

Native Trees, Shrubs, and Vines: A Guide to Using, Growing, and Propagating North American Woody Plants by William Cullina

Natural Landscapes of Maine: A Guide to Natural Communities and Ecosystems by Susan Gawler and Andrew Cutko

The Nature of Light and Colour in the Open Air by M. Minnaert

The Nature of Oaks: The Rich Ecology of Our Most Essential Native Trees by Douglas W. Tallamy

Opening Your Wild Heart to the Healing Herbs by Gail Edwards

***Paeonia lactiflora* Garden Peony** Also called **Chinese Peony**. Red shoots appear in spring and form a bushy clump, about 3x3', of lustrous dark green deeply lobed foliage. Fat spherical buds on sturdy stems above the foliage gradually open into large beautiful flowers from late spring to early summer. (Ants may help the buds open so don't discourage their presence.) May take 3 to 5 years to establish before, blooming and resents being disturbed or left in a pot for more than one winter. Wait several years until the plants have many stems (therefore many eyes) before dividing. Z3. (Stock has 3–5 eyes, except where noted.)

***P. l.* 'Festiva Maxima'** 3' tall. Introduced in 1851. Heavenly scented large double white flowers with a light crimson drizzle upon the central petals. Early season blooms. 2–3 eyes.

L731* *A: 1 for $14.00 B: 2 for $24.50 C: 3 for $33.00

***P. l.* 'Nippon Beauty'** 24" tall. Single anemone-type with scarlet-red guard petals surrounding fringed red and gold petaloid centers. Unique and hard-to-find variety. Early-midseason blooms.

L732* *A: 1 for $14.00 B: 2 for $24.50 C: 3 for $33.00

***P. l.* 'Sarah Bernhardt'** 36" tall. Introduced in 1906. Fragrant flowers open with narrow red lines shot onto light rose-pink. Matures to delicate pink with a slight creamy-silvery edge. Can a pink be both warm and silvery? This one is. One of my favorites with exactly the right amount of doubling—appears richly full but not crammed. Late season blooms.

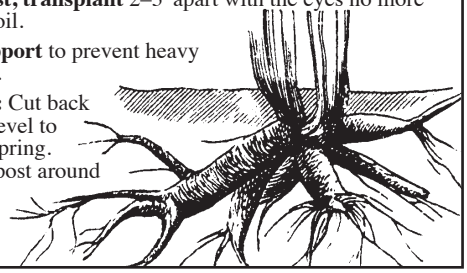
L733* *A: 1 for $9.75 B: 2 for $17.00 C: 3 for $23.00

***P. l.* 'The Fawn'** 32" tall. Introduced sometime between 1922 and 1943. Possibly the most posh peony you will ever set eyes on. Fragrant fully double blossoms feature translucent silky blush-pink petals covered with subtle deeper pink speckles. The overall effect is breathtaking. Sturdy stems not as floppy as most peonies. Late season blooms. Opens just before Sarah Bernhardt and keeps longer in a vase.

L734* *A: 1 for $18.75

Growing Garden Peonies

- **Peonies prefer:** full sun to part shade, and rich fertile well-drained soil
- **Recommended soil amendments:** compost, bone meal, azomite
- **After danger of frost, transplant** 2–3' apart with the eyes no more than 1½" below the soil.
- **Peonies require support** to prevent heavy flowers from flopping.
- **Autumn plant care:** Cut back to just above ground level to allow a fresh start in spring. Amend soil with compost around the base of the plant.



***Paeonia suffruticosa* Japanese Tree Peony** 48–60" tall. Also known as **Moutan**. Extravagantly big flowers with loose satiny petals bloom in early June before garden peonies. Full sun promotes fastest growth but also fades the flowers, which do best in dappled shade. Prefers well-drained neutral to slightly alkaline soil. Plant them deep, the graft union 3" below soil surface, to encourage fresh roots and basal shoots. Overwatering is the most common cause of failure—monitor moisture inputs carefully for the first few growing seasons. Two-year-old grafted plants may need 1–2 years to mature before blooming begins. Appreciates an annual top dressing of bone meal in early fall. Strong sturdy stems don't flop over like those on common garden peonies, so no staking needed. Z4.

***P. s.* 'Chojuraku'** Giant silky semi-double light lavender-pink flowers with small black flares surrounding a bright yellow eye.

L735* *A: 1 for $43.00

***P. s.* 'Shima-Nishiki'** Boisterous bicolor semi-double blossoms with white petals and bright red flames, or red petals striped with white, depending on your point of view. Young plants can display just red flowers, sometimes just white, but as the plant matures the red and white flames will become dominant. Borderline gaudy but so irresistible. We say go for it.

L736* *A: 1 for $50.00

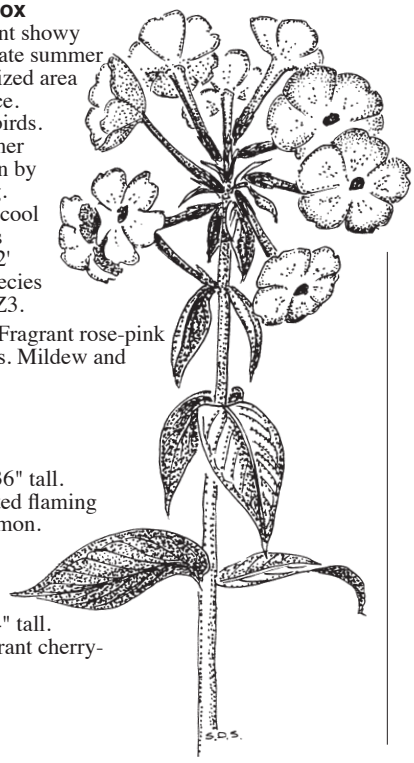
Penstemon digitalis **Foxglove Beardtongue - Organic** 3' tall. Beckon the birds and bees to your garden with these white to light pink spires covered with nodding tubular bell-shaped flowers. Plant 8–14" apart in full sun to part shade in fertile medium-dry well-drained soil. Will self sow and develop a nice stand over time. Native to eastern North America. Z3. **ME Grown.**

L737 ***A****: 1 for $7.75*
B*: 2 for $13.50*
C*: 3 for $18.25*

Perovskia atriplicifolia **Russian Sage** 36–48" tall. Blooms in midsummer with elegant slender spires of lavender-blue tubular flowers. Finely divided grey-green leaves are aromatic when crushed. Perovskia has one of the longest bloom times of any blue-flowered plant. Semi-woody shrub emerges slowly in spring; cut back after frost. Tolerates drought, loves heat and full sun, can't bear standing water. Likes to spread out once it gets established and it is so beautiful it deserves every foot of space it can get! Plant 24–36" apart. I suspect that Zone 4 reports of winterkill are from poor drainage rather than cold, so a cautious Z4.

L738 ***A****: 1 for $8.50*
B*: 3 for $22.25*
C*: 6 for $40.00*

Phlox paniculata **Garden Phlox** Large spreading clusters of fragrant showy long-blooming flowers in mid to late summer will accent your border or naturalized area with wonderful color and fragrance. Attracts butterflies and hummingbirds. Essential component of late-summer bouquets. Extend flowering season by watering and prompt deadheading. Prefers humus-rich soil that stays cool and moist in summer, and benefits from regular side-dressing. Plant 2' apart, full sun to partial shade. Species native to eastern North America. Z3.



P. p. **'Eva Cullum'** 24–36" tall. Fragrant rose-pink flowers with dark pinkish-red eyes. Mildew and disease resistant.

L739 ***A****: 1 for $6.75*
B*: 2 for $11.75*
C*: 3 for $15.75*

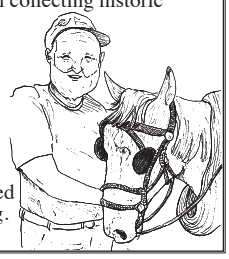
P. p. **'Orange Perfection'** 24–36" tall. Luminous clouds of sweetly scented flaming orange blossoms with hints of salmon.

L740 ***A****: 1 for $6.75*
B*: 2 for $11.75*
C*: 3 for $15.75*

P. p. **'Red Riding Hood'** 18–24" tall. A compact variety with large fragrant cherry-red flowers.

L741 ***A****: 1 for $9.25*
B*: 2 for $15.75*
C*: 3 for $21.25*

2012: The Maine Heritage Orchard is born.
Bunk: The MOFGA Board of Directors unanimously approved a motion put together by Russell Libby—then MOFGA director—and myself to create the Maine Heritage Orchard. For nearly 40 years I had been collecting historic fruit varieties and grafting them onto trees on our farm. I didn't think of myself as an orchardist, rather I was a collector and preservationist. The trees on our farm had become repositories—libraries—of varieties, some with as many as 10 or 12 varieties [grafted] on a tree. I'd run out of room. We needed a location where each variety could have its own tree. Russell suggested that we renovate an abandoned gravel pit and turn it into a preservation orchard. [See page 14.] Our proposal passed in October at what became Russell's last Board meeting. Sadly he died of cancer two months later.



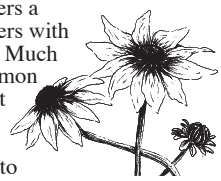
Pulmonaria **'Mrs. Moon' Lungwort** 9–12" tall and eventually up to 2' wide. Brighten up your shade garden with this bold-textured woodland perennial. Periwinkle-blue buds open to charming pink flowers, creating a striking effect with both colors appearing at once on the same plant. Large ovate slate-green leaves are dressed in vivid silver-white splotches. Presents a brilliant early season contrast to blooming daffodils and emerging hostas and ferns. Plant 1–2' apart in moist soil and full to partial shade. Z3.

L742 ***A****: 1 for $4.25*
B*: 3 for $10.75*
C*: 6 for $19.00*

Pulsatilla vulgaris **'Rubra' Pasque Flower** Up to 12" tall. Also known as **Wind Flower**. Frosty-green fuzzy flower stems often emerge when patches of snow are still on the ground. Soon after, large open bell-shaped dusky burgundy flowers with golden-yellow stamens bloom as the finely cut furry ferny foliage begins to form. At bloom time flower stems are typically 4–5" tall but continue to grow after blooms have passed, eventually reaching heights of 9–12", with unique spherical clusters of feathery silvery seedheads. Excellent choice for rock gardens and the front of the border. With proper care it will develop a deep extensive root system. Plant 10" apart in full sun to part shade in rich seriously well-drained soil. Prefers not to be disturbed once established. Species native to Europe. Z4. (3½" plug stock)

L743 ***A****: 1 for $4.50* ***B****: 3 for $11.75* ***C****: 6 for $21.00*

Rudbeckia fulgida **'Goldsturm'** 2' tall. Domesticated cousin of the beloved Black-eyed Susan, Goldsturm offers a profusion of bright ebullient golden-yellow flowers with dark central cones from July through September. Much larger blossoms—up to 5" across—than the common wildflower. Strong stems ideal for cutflowers that last a long time in the vase. Attracts pollinators of all shapes and sizes. Seed cones feed wildlife throughout the winter. Plant 12–24" apart in full to part sun. Species native to southeastern U.S. Z3.



L744 ***A****: 1 for $5.75* ***B****: 2 for $10.25* ***C****: 3 for $13.50*

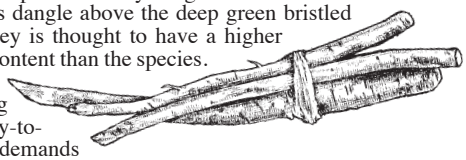
Sempervivum **Hens and Chicks Mix** If you've got boulders in the back forty or a rocky sandy sun-drenched spot in the dooryard, you have the makings for an amazing cascading Sempervivum display. *Sempervivum* means 'always alive.' Low-growing rosette-forming succulents produce runners and babies by the boatload. Drought- and heat-tolerant beyond belief, and cold-hardy, too! Sempervivums offer a fun way to learn about fractals and how our world works—you can plant them in a strawberry pot with the kids for a fun easy-to-care for botany/math project, or go whole hog and build a mini-boulder palace all decked out in Hens and Chicks and mosses. Performs best in super-drained gravelly soil with lots of sun and dappled shade. We're offering a mix of varieties including reds, greens and purples. Z3. (2½" pots)

L745 ***A****: 1 for $4.50* ***B****: 3 for $11.25* ***C****: 6 for $20.25*

Symphyotrichum novae-angliae **New England Aster - Organic** Grand heights of 4–6' tall! Freely branching sprays of brightly colored flowers decorate the autumn landscape throughout the Northeast. Colors range from blue-purple to lavender-pink with yellow eyes. Asters add hardy grace to the back of the wild border and will naturalize on banks or in the meadow. Cut back slightly in early to mid June to induce an abundance of 1½–2" rayed blooms from late August into October. Deer usually don't eat them. Provides a late-season source of nectar for hungry pollinators. Plant 12–18" apart in light moist humusy soil in full sun with good air circulation. Native to eastern North America. Z3. **ME Grown.**

L746 ***A****: 1 for $7.75*
B*: 3 for $19.75*
C*: 6 for $35.25*

Symphytum **x** ***uplandicum*** **'Bocking 14' Russian Comfrey - Organic** 24–48" tall. Highly recommended as a companion plant for orchards. Makes an excellent addition to the compost pile as it is rich in silica, nitrogen, magnesium, calcium, potassium and iron. Use as mulch or turn the leaf into compost tea for your garden. Clusters of bell-like magenta-purple flowers dangle above the deep green bristled foliage. Russian comfrey is thought to have a higher pyrrolizidine alkaloid content than the species. *S. officinale* (page 66) is preferred for making herbal medicines. Easy-to-grow vigorous plant demands space and if the roots are disturbed *can be very invasive; be careful where you plant it and control with regular harvest*. Plant 24" apart in well-drained soil, sun or shade. Z3. **ME Grown.**

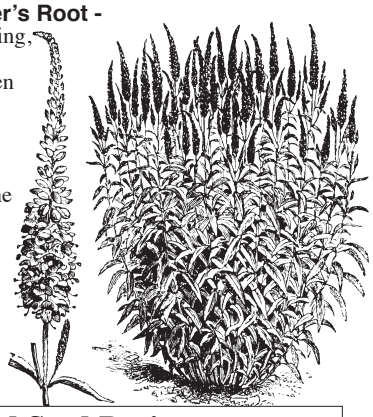


L747 ***A****: 3 root cuttings for $19.50*

Tradescantia ohiensis **Ohio Spiderwort - Organic** 3' tall. Add shades of blue to your native pollinator garden with attractive blue-green clump-forming grass-like foliage and clusters of 1" lavender-blue 3-petaled flowers with bright yellow anthers. Blossoms open in the morning and close in the heat of the day, May through July. Spreads by underground rhizomes. Tolerates both clay and sandy soils. Plant 12–18" apart in full to part sun. Native to central and eastern North America. Z4. **ME Grown.**

L748 ***A****: 1 for $7.25*
B*: 3 for $18.50*
C*: 6 for $33.50*

Veronicastrum virginicum **Culver's Root - Organic** 4–6' tall. Elegant and towering, with large 9" flower spikes of densely clustered tiny white blossoms that open from the top down in early summer. Lance-shaped leaves form whorls on rugged upright stems that rarely need staking. Bees love this flower. Adds beautiful architecture to the back of the perennial border and is a requirement in any well-built rain garden. Plant 2' apart in full sun, in wet well-drained soil. Native to eastern North America. Z3. **ME Grown.**



L749 ***A****: 1 for $7.75*
B*: 2 for $12.50*
C*: 3 for $16.75*

Native Plants & The Wild Seed Project

The Maine-based non-profit **Wild Seed Project** (wildseedproject.net) is a great place to learn about growing native plants from seed and incorporating them into the landscape. Wild Seed Project works to increase the use of native plants in all settings in order to conserve biodiversity, encourage plant adaptation in the face of climate change, safeguard wildlife habitat and create pollination and migration corridors for insects and birds. As a small cooperative seeking to provide ethically sourced plants to our customers, we at Fedco have been deeply appreciative of guidance from Wild Seed in helping us determine which plants are at-risk of being pillaged in the wild. If you want to support this important work, you can donate to Wild Seed Project when you order from us.

Culinary and Medicinal Herbs

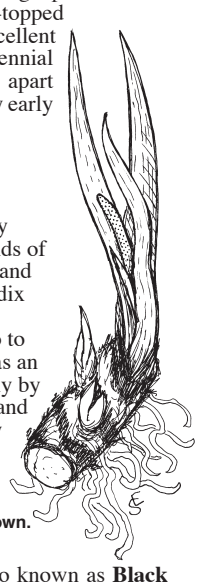
The following plants have long histories of traditional medicinal or culinary use. It's up to you to educate yourself about the safety and efficacy of using plants for medicinal purposes. The statements in our catalog regarding traditional medicinal uses of plants have not been evaluated by the FDA. The plants we sell are not intended to diagnose, treat, cure, or prevent any disease.

Plants may take a year or more to establish before they flower; roots often take several years to reach harvestable maturity.

Achillea millefolium **Yarrow - Organic** 24" tall. Named for its use by Achilles to staunch battle wounds, has a centuries-old tradition of use as an external styptic. A natural anti-inflammatory, yarrow has been used by women to regulate the menstrual cycle, reducing heavy bleeding and easing period pain. Yarrow is often used in combination with other herbs as a cold remedy and to reduce fever. Infusion of flowering tops stimulates healthy digestion and improves circulation. White flat-topped flower clusters bloom June through September. Excellent orchard companion and beautiful addition to the perennial border, meadow, herb or moon garden. Plant 18–24" apart in full sun and well-drained soil. Species introduced by early European settlers of North America. Z3. **ME Grown.**

L750 ***A****: 1 for $7.75*
B*: 2 for $12.50*
C*: 3 for $16.75*

Acorus americanus **Sweetflag** 24–36" tall. Hardy herbaceous water-loving bog plant forms striking stands of broad sword-like foliage that smells sweetly of citrus and vanilla when crushed. A spathe-less yellow-green spadix the length of a finger pokes out in early summer and eventually develops into fleshy berries containing two to three seeds. Dried roots have been traditionally used as an aromatic bitter for digestive upsets. Spreads vigorously by rhizomes in quiet shallow waters, wet open marshes, and along the shoreline. Can also be grown in consistently moist garden soil, 12–18" apart in full sun or light shade. Not to be confused with the similar European species, *A. calamus*. Sustainably grown. Native across northern U.S. and southern Canada. Z3. **ME Grown.**

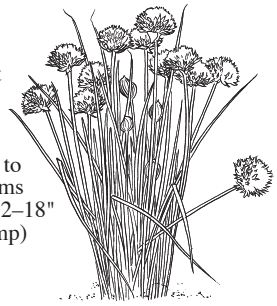


L751 ***A****: 3 for $20.00*

Actaea racemosa **Black Cohosh** 6–10' tall. Also known as **Black Snakeroot** or **Fairy Candles**; formerly known as *Cimicifuga racemosa*. The ultimate backdrop for the lightly shaded woodland garden. From late July into August, long arching racemes of creamy white and gold serpentine flower spikes soar over a 3–4' mound of fine-textured green compound foliage. Diuretic and anti-inflammatory. Anti-spasmodic for cramps, pains, cramped nerves and emotions, included in many premenstrual and perimenopausal formulas. Roots contain salicylic acid. Pregnant women avoid. Prefers part shade, but tolerates full sun in deep moist soil. Grows well in wet spots. Develops large clumps of rootstock so give it room to spread. Plant 3' apart in rich moist soil, part sun, part shade. Our stock is sustainably grown. Native to eastern North America. Z3. **ME Grown.**

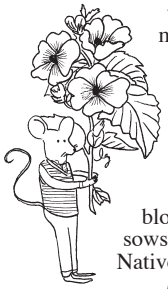
L752 ***A****: 1 for $9.50* ***B****: 2 for $16.25* ***C****: 3 for $22.00*

***Allium schoenoprasum* Chives - Organic**
12" tall. Edible spreading groundcover has a layman's reputation for warding off scab on fruit when planted around the tree. Is thought to act as an aromatic pest confuser, emitting bitter aromas that deter critters from grazing in the garden. Chives are good to eat from early spring to heavy frost. Add greens and starry purple blossoms to omelets for subtle savory onion flavor. Plant 12–18" apart in full to part sun. Z3. **ME Grown.** (1-3" clump)



L753 ***A****: 1 for $6.75*
B*: 3 for $17.75*
C*: 6 for $31.50*

***Althaea officinalis* Marshmallow - Organic** 5–8' tall. Small delicate lavender-white flowers with darker lavender stamens appear up and down the stalks of this beautiful towering medicinal plant. I've been drawn to marshmallow ever since I watched herbalist Deb Soule rub its soft velvet leaf against her cheek and explain how much the ruby-throated hummingbird appreciates the nectar of marshmallow flowers. The leaf, flower and mucilagenous roots are traditionally used to soothe the mucous membrane linings of the lungs and digestive tract, and to calm the lining of the urinary tract. Leaf is best used fresh for tea, and the dried roots are best when soaked overnight in cool water for tea. Harvest 4-year-old roots for medicinal use. Wonderful in a hedgerow and magnificent planted with black cohosh as they often blossom together in late July and into August. Readily self-sows. Plant 1–2' apart in light moist soil, part sun, part shade. Native to Europe and Asia. Z4. **ME Grown.**

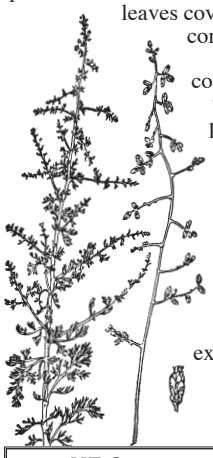


L754 ***A****: 1 for $9.25*
B*: 2 for $15.75*
C*: 3 for $21.25*

***Arnica chamissonis* - Organic** 8–12" tall. Low spreading groundcover with bright yellow daisy-like flowers used externally in oils and salves to treat bruises, sprains and inflammation. Never take internally except in homeopathic doses. In the right conditions a few plants will develop into a dense long-lived patch. Beneficial insect attractor. Blooms in July. Grows successfully in our climate and is a generally accepted medicinal substitute for *A. montana*. Plant in full sun 1' apart in moist well-drained soil. Native to western North America. Z3. **ME Grown.**

L755 ***A****: 1 for $7.75* ***B****: 2 for $13.50* ***C****: 3 for $18.25*

***Artemisia absinthium* Wormwood - Organic** 3' tall. Aromatic bitter herb native to Europe. Beautiful branching shrub-like woody plant with tall stiff stems and alternate finely cut silvery-grey-green leaves covered with silken white hairs. Useful as an orchard companion—foliage has a strong sage-like scent and acts as an aromatic pest confuser. Adds a frosty color to the back of a perennial border. Traditionally used as a digestive stimulant, mild antidepressant, potent insect repellent, and treatment for intestinal parasites. Notorious as the source of absinthe, an addictive and controversial drink, wildly popular in the 19th c. Legal contention swirls around the thujone content in drinks and herbal preparations flavored with wormwood essential oil, which is known to be safe only in minute doses and potentially toxic in excess. Deadhead to prevent unwanted self-seeding. Thrives in full sun and poor dry soils. Plant 24–36" apart. Requires excellent drainage. Z3. **ME Grown.**



L756 ***A****: 1 for $7.25*
B*: 2 for $12.50*
C*: 3 for $16.75*

2013: ME Grown
Bunk: Our 30th year. By now 18 local growers were producing 60% of our catalog items. Fedco Trees has never had an official nursery. Rather we cultivate and support small nurseries around the state that grow a wide array of plants for us. Our grower-Fedco partnership requires a lot of planning, often years in advance. We give each grower an order of how many plants we need, based on our multi-year sales records. We purchase all the rootstock our fruit tree growers require and then sell it to them at cost. We arrange the purchase of seedlings and liners of many other plants, often in bulk, and then pass along those savings to the growers as well. Some growers last a year or two and then move on. Others have been with us for decades.

***Astragalus membranaceus* Chinese Milk Vetch - Organic**
18–36" tall. Important Chinese medicinal known as ***huang qi***. Deep-rooted leguminous plant forms an upright bush with many stems, each thickly covered with tiny pinnate leaves and small arching racemes bearing rows of whitish-yellow flowers. When used over many months, is known to rebuild the immune system while combating exhaustion. Long-term tonic use is believed to increase stamina and improve resistance to cold temperatures. Harvest 4- to 6-year-old roots in fall. Plant in full sun, 12" apart in deep gravelly well-drained soil. Z4. **ME Grown.**

L757 ***A****: 1 for $9.25* ***B****: 2 for $15.75* ***C****: 3 for $21.25*

Echinacea 3–5' tall. North American native plant often over-harvested in the wild and in need of active cultivation in our gardens. Medicinal benefits vary amongst the different species. *E. purpurea* and *angustifolia* are considered the standard for making medicinal tincture. *E. paradoxa* does share some of the same immune-stimulating compounds as *purpurea* but in our opinion is best planted for the birds and the bees as a complement to your *purpurea* patch. Tolerates wind, heat and drought once established. Will reseed abundantly. Plant 20–30" apart in full sun and light sandy soil. Z3.

***E. paradoxa* Yellow Coneflower - Organic**
Bright pure-yellow flowers with drooping petals surround spiky dark brown seed cones—irresistible to gobbling goldfinches! Native to the Ozark Mountains and surrounding areas. **ME Grown.**

L758 ***A****: 1 for $7.25* ***B****: 2 for $12.50* ***C****: 3 for $16.75*

***E. purpurea* Purple Coneflower** *Echinos* means 'spiny' and the coneflower's spiny seedheads are a beautiful coppery yellow-brown, surrounded by a single row of reflexed lavender-purple petals. Attracts butterflies and other beneficial insects. Tincture the roots of 3-year-old plants for a remedy that gives an immediate boost to the immune system; use it when you feel a cold or flu coming on. Native to eastern and central U.S. Our stock is sustainably grown. **ME Grown.**

L759 ***A****: 1 for $8.25* ***B****: 2 for $14.50* ***C****: 3 for $19.25*

***Eupatorium perfoliatum* Boneset - Organic** 5–7' tall. Also called **Thoroughwort**. Majestic native with flat-topped clusters of creamy-white to milky-lavender flowerheads atop fuzzy upright stems with deeply veined dark green diamond-shaped perfoliate leaves. Traditionally used to alleviate the symptoms of "breakbone fever," hence the name boneset. Tincture of the flowering tops and leaves induces sweating, stimulates the immune system and acts as a mild anti-inflammatory. North American Indians and early colonial settlers administered boneset tea during flu epidemics, and its common use continued well into the 20th c. Peak bloom is mid to late August, providing a generous late-season supply of nectar for adult butterflies and other pollinating insects. Boneset is a practical and fetching addition to the wilder part of the orchard and perennial border. Plant 3' apart in moist soil and full sun to dappled shade. Native to eastern North America. Z3. **ME Grown.**

L760 ***A****: 1 for $7.25* ***B****: 2 for $12.50* ***C****: 3 for $16.75*

My Bleeding Heart Cordial

Adapted from *Herbal Revolution*, the new book by Maine herbalist Kathi Langelier, who writes, "When making medicine, holding intent and vision is an important part of the process, especially with this blend for healing the emotional heart. As you're gathering your herbs, meditate on why you're making this tincture, whether it's for yourself, a family member or a friend in need."

2 T dried rose petals
1 T dried hawthorn berries
1 T dried milky oak tops
2 tsp dried linden flowers
2 tsp dried lemon balm
1 t dried cinnamon chips
2 T honey
1 cup brandy

Place herbs in a pint jar, add honey and brandy, cover and shake.

Let sit for 4 weeks away from direct sunlight. Check regularly, smelling and tasting it now and then, and be reminded of your intention in making this medicine.

After 4 weeks, strain. If you'd like, add 2–5 drops flower essence of any of the following: bleeding heart, borage, forget-me-nots, dandelion. Store in labeled jar or dropper bottles.

Take 1 dropper (1/4 tsp) 1–3 times a day, in water or tea, as needed.

Glycyrrhiza glabra **Licorice - Organic** 3–4' tall. Sweet and soothing roots are used to revitalize adrenal glands, treat colds and bronchitis, reduce throat irritation, yet act as an expectorant and anti-spasmodic. Adds sweetness, harmony and palatability to nearly every herbal combination. *Culpeper's Complete Herbal* from 1653 advises that "by many years continuance in a place without removing…will bring forth flowers, many standing together spike fashion, one above another upon the stalk, of the form of pease blossoms, but of a very pale blue colour." Leguminous plant fixes nitrogen. Give it lots of room and keep it weeded so it can create the roots and runners you want. Roots penetrate deeply and take complete possession of the soil. Runners sometimes travel great distances before sending up a shoot—if the soil is loose you can pull up errant runners, coiling them like rope to hang in wreaths above the woodstove, convenient for winter teas. You can interplant small vegetables like onions, lettuce and beans during the first and second years of growth as licorice fills in. Plant 24–36" apart in sandy well-drained soil. Full sun. Mulch to prevent heaving. Roots attain harvestable size in 3 to 4 years. Z4. **ME Grown.**

L761 ***A****: 1 for $7.25* ***B****: 2 for $12.50* ***C****: 3 for $16.75*

Lavandula angustifolia **'Munstead' Lavender** 16–18" tall. Considered the hardiest lavender with light lavender flowers. Sweet-scented flower spikes extend above aromatic silvery-green lanceolate leaves. Blooms all summer. Makes a nice border, rockery, slope or specimen plant. Compact habit lends itself to edging walkways. Traditionally used to calm nervous excitability and relieve muscle tension. Plant 12–24" apart in full sun, in moist well-drained soil. Mulch to prevent winter heaving. Z4.

L762 ***A****: 1 for $8.50* ***B****: 2 for $14.25*

Levisticum officinale **Lovage - Organic** 6' tall. Looks like a giant celery plant with toothed compound leaves, greenish-yellow umbelliferous flowers and small oval seeds. A dramatic architectural element for an edible border; attracts beneficial insects. Glossy green leaves have a strong celery taste and can be used to flavor soups, stews and casseroles. Crush seeds and add to bread and pastries; candy the stems and roots into a sweet medicinal syrup that is said to restore the appetite and revive the love of life. Second-year plants are best for drying. Formerly used to mask the bitter herbs in medicinal concoctions. Pregnant women avoid. Plant 24–36" apart in full sun to part shade in rich moist well-drained soil. Native to Europe and Asia. Z3. **ME Grown.**

L763 ***A****: 1 for $7.25* ***B****: 2 for $12.50* ***C****: 3 for $16.75*

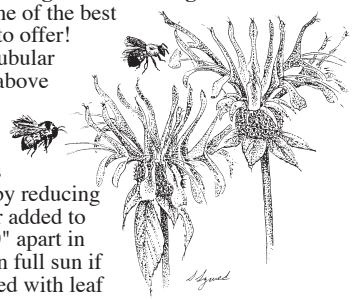
Melissa officinalis **Lemon Balm - Organic** 24" tall. The Greek word *melissa* means 'honeybee'—the plant in flower attracts them. Yellow-green scalloped lemony leaves are delicious in teas, salads, with fruit, or dried for sachets. Infuse leaves in oil for making potent lemony antiviral topical creams and salves. Plant in full sun in rich well-drained soil. Some say Zone 4, but our clump in Zone 3 has been coming back strong for 13 years, even after our Grammy Ethel Lewis mowed it repeatedly with her John Deere! Native to Europe and Asia. **ME Grown.**

L764 ***A****: 1 for $7.25* ***B****: 2 for $12.50* ***C****: 3 for $16.75*

Mentha piperita **Chocolate Mint - Organic** 18–24" tall. Our favorite mint! Bright sweet refreshing peppermint-patty flavor is a must-have for any winter dried-herb supply. Freshen your breath, settle your stomach, brighten up fruit desserts, garnish ice cream, flavor your favorite meat dish, or scent soaps and salves. We grew chocolate mint to enjoy during our warehouse crew tea breaks and to add to the communal hot cocoa pot. Harvest the leaves before it goes to flower. As with any mint, plant it where you want it forever. Plant in full sun in any decent garden soil. Some say Z5, although many of us have unstoppable patches in Z4. **ME Grown.**

L765 ***A****: 1 for $7.25* ***B****: 2 for $12.50* ***C****: 3 for $16.75*

Monarda **Bee Balm** Also called **Bergamot** or **Oswego Tea**. Beloved by bees, butterflies and one of the best hummingbird magnets nature has to offer! Wild and wily flowers form with tubular petals on pincushion heads borne above colorful bracts in July and August. Aromatic foliage. Good for borders, for wet areas and for cutting. Infusion of the aerial parts can be used to improve digestion by reducing flatulence. Delicious used as tea or added to meat and bean dishes. Plant 16–20" apart in light shade in moist soil. Thrives in full sun if given adequate moisture or mulched with leaf mold; tolerates most conditions.



M. bradburnia **'Bradbury's Monarda' - Organic** 2' tall. Also called **Bradbury's Bee Balm**. Midsummer blooms display whorls of pale pink petals speckled with dark purple spots. Shorter and more compact than *M. fistulosa*. Foliage looks good well into autumn here in central Maine. Z5. **ME Grown.**

L766 ***A****: 1 for $7.25* ***B****: 3 for $18.75*

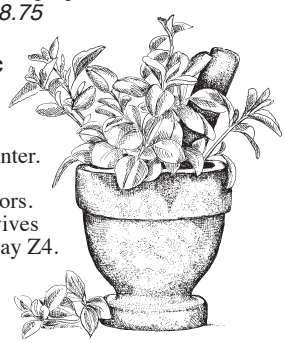
M. didyma **'Panorama Reds' - Organic** 3–4' tall. Fabulous blooms in a diverse range of red shades destined to attract scads of butterflies and hummingbirds for your cats and kids to chase in vain. Z3. **ME Grown.**

L767 ***A****: 1 for $7.25* ***B****: 3 for $18.75*

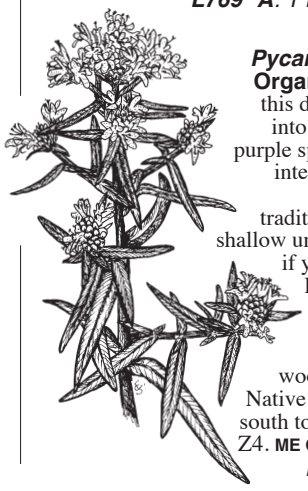
M. fistulosa **Wild Bergamot - Organic** 2–4' tall. Our native North American wildflower species with aromatic lavender blossoms. This is the species most commonly used for medicinal purposes. Z3. **ME Grown.**

L768 ***A****: 1 for $7.25* ***B****: 3 for $18.75*

Origanum vulgare **Oregano - Organic** 18" tall. Low-growing perennial with fragrant green and purple leaves and white flowers. This is the culinary oregano—dry the leaves and sprinkle them on pizza all winter. If given plenty of space in full sun, it will sprawl and attract a proliferation of pollinators. Plant 24" apart in medium garden soil. Survives some winters in Zone 3, but we can safely say Z4. **ME Grown.**



L769 ***A****: 1 for $7.25*



Pycanthemum virginianum **Mountain Mint - Organic** 30" tall. Feed your local pollinators with this densely flowered native. Blossoms, from July into August, are white to light lavender with tiny purple spots. Wispy upright branching foliage smells intensely minty when crushed. A strong infusion of the aerial parts makes a tasty minty tea, traditionally used to settle indigestion. Spreads by shallow underground rhizomes and will ramble around if you let it, so choose planting location wisely! Prefers moist soil and will do well in full sun to part shade. Once established, it will grow well in a wide range of soils. Tolerates clay, heat and drought. Try growing it along the woodland edge—deer are not fond of this plant. Native to eastern U.S. from Maine to Michigan and south to Georgia and Texas. *Pregnant women avoid*. Z4. **ME Grown.**

L770 ***A****: 1 for $7.25*
B*: 2 for $12.50*
C*: 3 for $16.75*

2017: Black Oxford abounds; Bunker retires (sort of).

Bunk: Although our historic sales figures are not perfect, by my figuring we sold our 5,000th Black Oxford tree this year. I knew now that this wonderful apple—my favorite—would not be lost for at least another 100 years or so. I believed—and still believe—that the best way to preserve an historic apple variety—and plant diversity in general—is to get them growing along sidewalks, in suburban backyards, on homesteads and farms. Over the years we have made dozens of rare and historic varieties available to our customers. For that we should all be very proud.

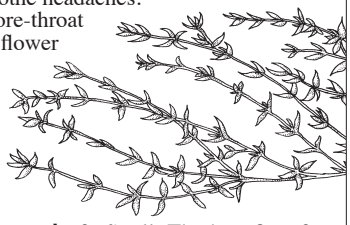
In 2017 my role in writing the catalog and finding the catalog artists came mostly to an end. I had turned 65 and it was time to step back and let the younger generation create and implement the Fedco Trees vision of the future. The results were immediate and wonderful. The catalogs began to have a dedicated theme. New artists were discovered. Fedco Trees began to take on new life. The time was perfect for me to step back.

Appropriately, Fedco Tree's preorder sales topped $1 million.

***Symphytum officinale* Comfrey** 24–48" tall. Also called **Knitbone**. Clusters of bell-like pinkish purple flowers dangle above the deep green bristled foliage. Highly recommended as an orchard companion. Well known for its skin-soothing properties. Contains allantoin, promotes healing of skin and bone; also demulcent for lung and throat. Research on comfrey is inconclusive, but most agree that this species is the one to use medicinally. Easy-to-grow vigorous plant *can be invasive;* be careful where you plant it and control with regular harvest. Choose a site that will never see a rototiller or you will live to regret it! Plant 16–24" apart in well-drained soil, sun or shade. Native to Europe and Asia. Z3. **ME Grown.**

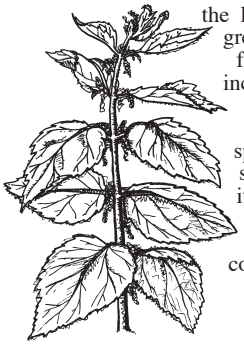
L771 ***A****: 1 for $7.00*
B*: 3 for $18.00*
C*: 6 for $32.25*

***Thymus vulgaris* German Winter Thyme - Organic** 10–15" tall. Fragrant sprawling perennial brings depth of flavor to soups, gravies, casseroles. Said to calm the nerves, soothe headaches. As good in salad dressings as it is in sore-throat remedies. Bees love its short lavender flower spikes. Likes well-drained light dry alkaline soil. Plant 18" apart, full sun, in light sandy or loamy well-drained soil. Native to Europe. Z4. **ME Grown.**



L772 ***A****: 1 for $7.25*
B*: 2 for $12.50*
C*: 3 for $16.75*

***Urtica dioica* Stinging Nettle - Organic** 3–6' tall. The benefits of this plant outweigh the risk of a short-lived sting. Biodynamic gardeners use the dark green nettles to increase potency of neighboring herbs and to stimulate humus formation. Young shoots are high in minerals—the leaves are delicious steamed as early spring greens. Dried nettles used as a feed supplement for chickens have a layman's reputation for increasing egg production. Handle fresh and dry herb with gloves. Cooking removes the sting. Choose your planting site carefully; nettles spread readily, and both the rhizomes and leaves sting. An indicator of super-fertile soil where it volunteers. Plant in damp rich soil with high nitrogen content; especially likes composted manure piles or the lush side of your leaky compost bin. Z2. **ME Grown.**



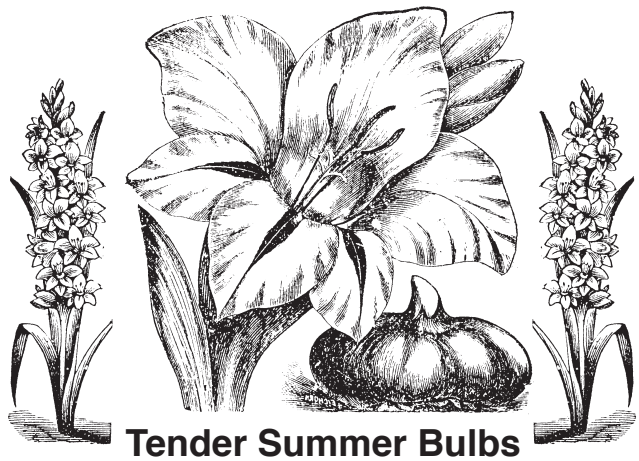
L773 ***A****: 1 for $7.25*
B*: 2 for $12.50*
C*: 3 for $16.75*

***Verbena hastata* Blue Vervain - Organic** 5–7' tall. Elegant tall branching spikes of vibrant blue-purple flowers. Honeybees mingle amongst the blossoms all day. Commonly used as a nervous-system tonic and mild sedative. Tincture of the fresh flowering tops is said to ease stress-induced neck tension, as well as help women to navigate premenstrual, perimenopausal and menopausal waters. Grows wild along streambeds and marshes but will happily grow in ordinary garden soil. Plant 1–2' apart in full sun. Native to North America. Z3. **ME Grown.**

L774 ***A****: 1 for $7.25*
B*: 2 for $12.50*
C*: 3 for $16.75*

2018-2021: Onward!

Bunk: Since mostly retiring from Fedco Trees I have remained active in the plant world. Maybe even more so than ever. Cammy and I maintain large gardens and orchards at home. Our trial orchard includes several hundred selections of apples including our own discoveries, discoveries from friends, rare selections from collections across the country and personal favorites. I consult regularly with the Maine Heritage Orchard staff, do apple ID's and participate in a nationwide group of apple explorers, creating a national apple database and DNA profiling apples. Cammy and I have an apple CSA where we provide our customers with rare and unusual varieties in the fall. No Macs or Honeycrisps! I give talks now and then and write the occasional article. Maybe someday there will be another book. I try not to go anywhere much. I read more, learn more and spend lots of time outdoors enjoying the color green in all its multitude of shades. Feel free to write me about your discoveries and thoughts. I'd love to hear from you.



Tender Summer Bulbs

Spring-planted bulbs offer wonderful variety to the cutflower market and are a staple in old-fashioned gardens. Once upon a time, back roads beckoned my mother to spend many a summer Sunday in search of the best deal on roadside dahlias, glads and lilies. Every few miles she would find buckets brimming with blooms for 10¢ a stem. Nowadays it's more like $1. Spring-planted bulbs are not hardy to northern climes. Smart and thrifty people lift and store them over the winter; the rest of us treat them as annuals.

***Crocosmia* x *crocosmiiflora* 'Lucifer'** 24–36" tall. Glows in the garden! Midsummer sprays of bright red flowers open from bottom to top on long arching bronze stems, like bursts of flame above gladiolus-like foliage. *Lucifer* is Dutch for 'match.' Grows well in pots. Makes a long-lasting cutflower. Plant in full sun, 3" deep, 3" apart in moist well-drained soil.

L775 ***A****: 10 for $9.00* ***B****: 20 for $15.50* ***C****: 50 for $35.00*

Dahlia We were not able to confirm our supply at press time. *Please check our website for availability.*

***Gladiolus* Sword Lily** Showy summer bloomer excels as a cutflower. Each stalk is covered with 10 or more open funnel-shaped flowers that bloom from bottom to top. Named for their sword-like leaves; a gladiolus is a small Roman sword. Each stalk blooms for about a week, roughly 8 weeks after planting.

***G.* Large-Flowering Glad Mix** 36" tall. A mercurial mix of colors, stripes, stipples, bicolors, tricolors—what fun!

L776 ***A****: 10 for $5.25* ***B****: 20 for $9.00* ***C****: 50 for $20.50*

***G.* Mardi Gras Mix** 36" tall. A festive parade of blossoms in shades of purplish-pink and peachy-gold on vibrant green foliage. Purple, green and gold are three of the traditional colors often used in celebration of Fat Tuesday. Purple is said to symbolize justice; green, faith; and gold, power. This mix is bright and celebratory with a touch of subtle elegance.

L777 ***A****: 10 for $7.95* ***B****: 20 for $13.75* ***C****: 50 for $31.00*

***G.* Nanus Glad Mix** 24" tall. Marvelous miniature glads in mixed colors, bicolors and butterfly types. Very satisfying clumped in a bed or as cuts. They're just darling! Some suppliers offer these as Hardy Glads, supposedly hardy in Zone 5. This is optimistic unless you have very good snow cover or winter mulch. Even with mulch, we'd say Z6.

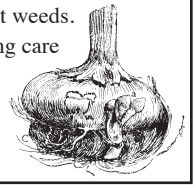
L778 ***A****: 12 for $7.75* ***B****: 24 for $13.50*

***G. murielae* Fragrant Gladiolus** 12-18" tall. Also called **Acidanthera**. Sword-like foliage is topped by wonderfully scented star-shaped 2" white flowers with mahogany-purple centers on arching stems. Beautiful in the garden or as a cutflower; another name is **Peacock Orchid**. Culture like gladiolus, but blooms slightly later. Z7.

L779 ***A****: 20 for $6.25* ***B****: 40 for $11.00* ***C****: 60 for $14.50*

Growing Gladiolus

- After the last spring frost, plant corms in full sun 5" deep and 8" apart.
- Stagger plantings for a long season of blooms: First planting in early to mid-May, then again every two weeks through mid June. This schedule will keep the flowers coming July through August.
- Hill or stake the corms at planting time to keep the plants from keeling over when the foliage and flower spikes get top heavy.
- Mulch with straw to retain even moisture and prevent weeds.
- Cut the stalks when 2–3 blossoms have opened, taking care to spare the leaves, which feed the developing corm.
- To overwinter the corms: dig them up after the tops have died, discard the old one, clean the new one, allow it to dry off, and store them in paper bags in a well-ventilated cool (35–45°) dark dry place.



Guide to Planting and Care

When you get your order: Immediate Care
DO NOT ALLOW ROOTS TO DRY OUT AT ALL!!!

When your new trees and shrubs arrive, they need to be planted as soon as possible. Don't be deterred by snow. If you can dig a shovel into the ground, plant your trees. If you wait until spring is in full swing, your plants might become stressed and have a hard time recovering.

Sometimes frozen ground makes immediate planting impossible. When this is the case, follow the instructions below and all will be well. **Why do we send plants even when there is snow on the ground?** The weather may be fickle but we must be steady. Bare-root plants need to move out of storage and travel to their permanent homes before or as they are breaking dormancy, but not much later. For our system to work, we must follow a tight shipping schedule regardless of regional weather conditions. We begin shipping late March and finish late April, sending orders by climate zones, warmer zones first.

If you can't plant immediately and are unable to store or heel in plants as instructed below, ordering bare-root plants may not be right for you.

Planting Woodies Within 48 Hours

Leave the plastic wrapping around the root ball. Add some water to remoisten the packing material and store your trees and shrubs in a cool shaded place like a shed, barn or cellar. Avoid heat and sunlight.

If You Cannot Plant Within 48 Hours

You can keep plants for a week or two by following one of these temporary measures and continuing to water as needed:

• Open your package and inspect for damage. Fold the plastic back from around the tops. Keep the wet shredded newspaper around the roots and re-wrap the plastic around the root ball, packing firmly to eliminate air pockets. Water as needed to keep the roots moist, but don't let them stand in water. Keep the trees in a cool shaded or dark place like a shed, barn, cellar or garage, but don't allow the plants to freeze before you get them in the ground. Avoid heat and sunlight.

• You could also "heel in" your plants temporarily in a protected cool shady spot. Dig a trench or turn back an appropriate amount of earth and bury the roots; tamp firmly to remove air pockets. Water thoroughly. Plant as soon as possible.

Caring for Other Plants Until Planting Time

Asparagus

Store asparagus roots dry and uncovered in a cool shaded place.

Hops

Refrigerate slightly moistened rhizomes in a plastic bag until planting.

Horseradish & Rhubarb

Open package slightly to allow the plants to breathe. They should be fine left in their packaging and kept in a cool place (ideally 35–50˚). They want to stay moist but not wet.

Mushroom Spawn

Refrigerate in packaging until ready to use.

Strawberries

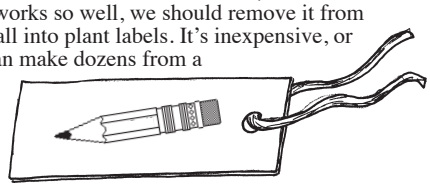
We ship with the roots slightly on the dry side. If it's going to be a while until planting, mist the roots and re-cover. Refrigerate until you are ready to plant. When it's time to plant, do it in the evening or on a cloudy day.

Herbaceous Perennials

Open bags and check the stock immediately. Roots and crowns should be firm and pliable, not squishy or brittle. Surface mold is harmless and will not affect the plant's future performance. Store plants in their packaging in a cool (35–40˚) location until you are ready to plant. If it's going to be awhile, you can pot up your perennials. **See page 56 for more detailed perennial planting instructions.**

The Perfect Tree Label

Commercially available garden labels do not last. Permanent marker fades. Aluminum tears off in the wind. And so on. Now, we make our own using vinyl siding. It works so well, we should remove it from all the houses and make it all into plant labels. It's inexpensive, or easily salvaged, and you can make dozens from a single piece of siding. Cut siding into strips using a utility knife. Snip strips to length using hand pruners. Drill a hole at one end. Attach with wire. Write on labels with pencil, NOT a marker. Pencil will last for decades.



The basics of tree care outlined here are meant to get you started. Obviously, we can't tell you everything you need to know in a few pages. Some specific information, like location or soil preferences of particular plants, is in the item descriptions. A soil test is useful in determining the specific needs of your site. Fedco's Organic Growers Supply offers a soil testing and fertilization recommendation service. Learn more at fedcoseeds.com/ogs.

Reading, observation, trial and error, and talking with other growers and with extension agents can expand your knowledge of trees and shrubs. Consult the OGS book list for recommended reference books. Also, find useful links at our website, fedcoseeds.com/trees.

General Planting Directions for Trees and Shrubs

The best way to ensure your plants will thrive is to follow cultural requirements. Choose the right site for the plant. Add soil amendments only as needed. Many native plants don't require any fertilization. Fruit trees may need more. (See next page for fruit tree fertilization recommendations.)

To reduce transplant shock, plant on cool cloudy days in the early morning or late afternoon. Soak roots of deciduous trees and shrubs for up to 24 hours before planting, but not longer. Keep the roots from drying out; even a few minutes in the sun and breeze can damage a tree or shrub. Keep them watered and covered until the moment you set them in their planting holes!

Follow these steps for planting:

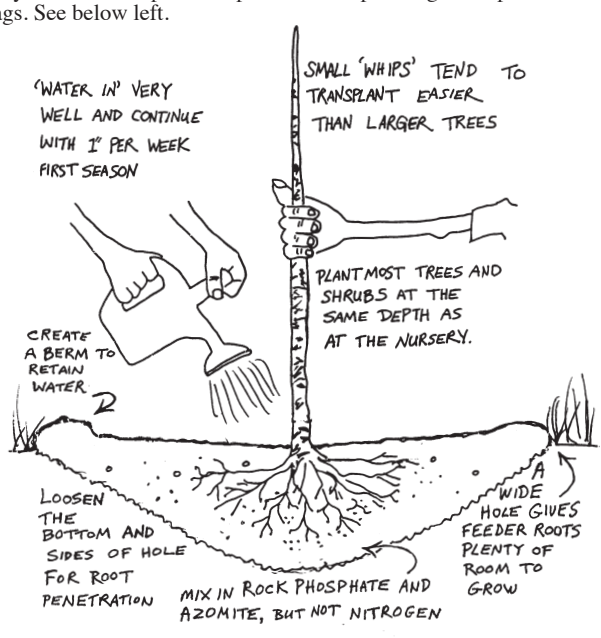
1. Dig a large hole, at least twice as wide and about as deep as the root system. Most roots grow laterally and need plenty of room to spread out. Your trees will benefit if the hole is at least 3' wide.

2. Loosen up the soil at the bottom of the hole and especially around the sides. For fruit trees, if you haven't used our *Deluxe Fall Preparation Method* (next page), you may add a 3-lb bag of our planting mix (available in our **Seeds & Supplies catalog**, or at fedcoseeds.com/ogs), or well-aged compost and mineral fertilizers like rock phosphate or azomite, but *not* raw manure or other nitrogen sources. Incorporate into the soil, then make a mound at the bottom of the hole over which to spread the roots.

3. Examine the plant for a "dirt line" or a change in bark color indicating nursery depth. (This is different from the graft line.) Generally, you should plant trees and shrubs at the same depth they grew in the nursery. Set the plant in the hole and spread the roots out around the mound. Make sure the roots are not circling in the hole. It's better to trim roots a bit than coil them. Hold the plant at the right depth as you backfill the soil around it. Tamp firmly to remove air pockets.

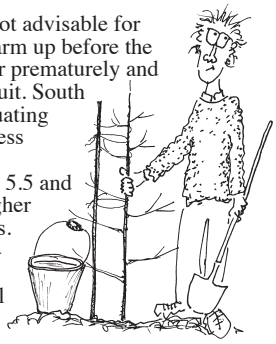
4. Water immediately. Don't skimp on the initial watering; make sure there's plenty to settle in all the loosened soil. Wiggle the trunk as the water seeps in to ensure no air pockets remain around the roots. Leave a berm around each tree so water will not run off. Keep trees well watered throughout the first summer. They require the equivalent of 1–2" rain per week. Longer deeper soakings are effective; frequent sprinklings are not.

5. To remember which varieties you planted, paint a map of the orchard on your wall, or replace the plastic Fedco plant tags with permanent vinyl tags. See below left.


'WATER IN' VERY WELL AND CONTINUE WITH 1" PER WEEK FIRST SEASON
SMALL 'WHIPS' TEND TO TRANSPLANT EASIER THAN LARGER TREES
PLANT MOST TREES AND SHRUBS AT THE SAME DEPTH AS AT THE NURSERY.
CREATE A BERM TO RETAIN WATER
LOOSEN THE BOTTOM AND SIDES OF HOLE FOR ROOT PENETRATION
MIX IN ROCK PHOSPHATE AND AZOMITE, BUT NOT NITROGEN
A WIDE HOLE GIVES FEEDER ROOTS PLENTY OF ROOM TO GROW

Choosing a Site for Fruit Trees and Berries

The best sites for fruit crops have well-drained fertile soils, protection from wind, good air drainage and full sun. A gentle slope and 6–8 hours of full sun per day is ideal. Good air flow will moderate frosts and fungal disease. If possible, avoid "frost pockets."



Sunny south- or west-facing slopes are not advisable for less hardy varieties. These slopes tend to warm up before the danger of frost has passed. Trees may flower prematurely and then be damaged by frost, causing loss of fruit. South and west slopes may also have widely fluctuating early spring temperatures that can damage less hardy trees.

Soil pH for fruit trees should be between 5.5 and 8.0, toward the lower end for apples, the higher end for peaches, and in the middle for others.

Fruit species have optimal space requirements. See chart, next page.

Do not plant trees where power lines will interfere with them.

Fall Preparation or Spring Initial Feeding for Fruit Trees

If you're interested in preparing locations for your trees this fall, or for feeding newly planted fruit trees, the following amendment recipe should address most sites in the eastern U.S., which tend to be acidic and moderate to low in calcium and phosphorus. To order any of these products, refer to our Seeds & Supplies catalog, or fedcoseeds.com/ogs.

Deluxe Fall Preparation Method

Without digging the hole, cover an area 4–6' in diameter with:

- 5 lbs gypsum or Hi-Cal lime
- 5 lbs colloidal phosphate (short-term calcium and phosphorus)
- 5 lbs azomite (long-term minerals and trace minerals)
- 5 lbs granite meal (for improved soil texture)
- 2-3 lbs Hum-Amend Max (aids mineral and rock-powder breakdown)

For building high levels of humus, also add:

- 2 lbs alfalfa meal
- 2 lbs bone char
- 2 lbs kelp meal
- 2 lbs blood meal
- 100 lbs compost (1/8 yard)

Cover with a 3–4" mulch of lawn clippings, leaves or brush chips, which will smother the sod, conserve moisture, prevent leaching and provide a habitat for soil organisms to break down the recipe. In the spring, pull back the mulch and dig your tree hole, incorporating the mineral supplements and compost into the backfill.

If you didn't get around to fall prep, you can apply this same mix as a mulch to your newly planted tree in the spring.

Simpler Method

Forgo the soil amendments and simply pile 1–2 wheelbarrows of compost on each planting-hole site. If you live by the ocean, add a couple wheelbarrows of seaweed. Then cover with mulch. In the spring, pull back the mulch and plant your fruit tree, incorporating the compost into the hole as you dig.

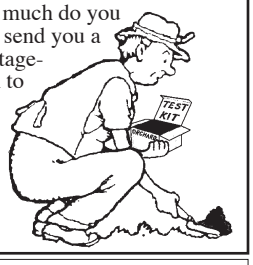
Feeding Older Fruit Trees

Cover the surface of the ground out to the tree's drip line with the same materials listed above. For larger trees (five years and older) increase the mineral amount to 10–15 lbs each. For ancient trees you can use up to 25 lbs of each mineral in a ring beneath the drip line.

For revitalizing older fruit trees, you could also consider using our Ancients Rise fertilizer mix, found at fedcoseeds.com/ogs.

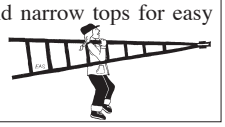
Mulch as described above.

Soil testing & organic fertilizer recommendation service



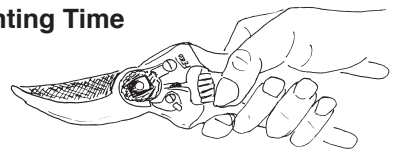
Which soil amendments do you choose and how much do you apply? Don't guess—test! Fedco can help. We'll send you a soil test kit and sampling instructions, plus a postage-paid box to return your soil sample and test form to the Maine State Soil Lab. Once your results are in, we'll offer customized recommendations for how to correct any deficiencies or imbalances in your soil. Cost is $45. **Learn more about this service in our Seeds & Supplies catalog**, or at **fedcoseeds.com/ogs**.

Orchard Ladders: Sturdy lightweight traditionally shaped wooden orchard ladders have wide bottoms for stability and narrow tops for easy handling and placement. Contact the manufacturer:



Peter Baldwin, (207) 722-3654
baldwinpetert@gmail.com
baldwinappleladders.com

Initial Pruning at Planting Time



All Trees and Shrubs

Prune any branches that were broken during shipping. Sometimes we need to prune a central leader in order to fit a tree into a shipping box; don't worry—a new leader will grow from the topmost bud. Prune all dead or injured branches and roots. Further pruning of most trees is not necessary at planting time.

Do not prune tops or prune or bend tap roots of nut or oak trees unless necessary.

Find general information on pruning on p. 42. Conifers (p. 33), roses (p. 47) and lilacs (p. 50) benefit from special pruning especially in later stages of growth.

All Fruit Trees

Avoid pruning young trees except to establish a basic shape, as it delays bearing. It's okay to cut off extra trunks and large branches as needed, but keep in mind that every time you prune potential leaf-bearing branches from a young tree, you set it back. The tree will grow quickly and fruit sooner if you allow it to maximize photosynthesis. Once it begins to fruit, you can prune annually. Always remove suckers or root shoots.

On peaches and plums, the trees may want to develop 2–4 leaders, or an open-vase shape. Always prune just above a good strong bud that faces a direction you'd like your branch to grow. On apple and pear trees, you may choose to either leave the central leader alone and let it grow or cut it back according to the instructions below. Either way is acceptable; it's a matter of personal preference.

Apple Trees

Apple trees will almost always benefit from light initial pruning to establish shape. After that, refrain from pruning until the tree begins to fruit.

- **Year one (initial planting time):** If the tree is a branch-less "whip," you may cut the top back to a strong bud about 3–4' from the ground. This will encourage branching. If the new tree arrives with branches, prune off all but 3–4 branches at the height you'd like for your first tier, about 3–4' from the ground, or higher if you prefer. The lowest scaffold (branch layer) should be very wide to collect as much sun as possible. If too low, these long branches will rest on the ground under the weight of fruit, and the deer will have a field day. Also, it becomes difficult to mow under and mulch.

Some folks choose not to prune at the time of planting and wait to shape the tree in subsequent years. This method is fine, too.

- **Year two:** Trim off root suckers or other odd branches that come up from around the base. Otherwise, leave the tree alone and let it grow.
- **The next few years:** If something looks really crowded, broken or dead, prune it. Otherwise, leave your tree alone and let it grow. If you don't fuss over it too much, you'll get fruit sooner!

Pruning Established Fruit Trees

Once your fruit tree begins to bear, you should prune annually. Good pruning brings sunlight to all parts of your tree. Maximum sunlight encourages more and higher-quality fruit. Sunlight also encourages fruit buds to form for next year's crop. A well-pruned tree will produce larger fruit and will tend toward more annual bearing. Good pruning discourages fungal diseases and promotes greater spray penetration. There's an old saying that a bird should be able to fly through your fruit tree.

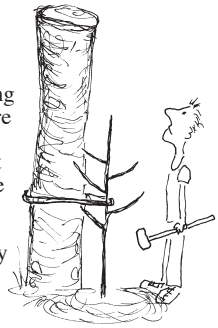
Most pruning should be done in late winter or early spring. We recommend a good-quality pair of hand shears and a lightweight pruning saw. You may also wish to invest in long-handled loppers, a pole pruner or a pole saw. Keep your pruning tools sharp for smooth clean cuts.

Any good book on growing fruit trees will have the information you need. Consult old and new books as well as orcharding articles and develop a system that works for you. Pruning is not difficult and will make a huge difference.

Mulch

Keep weeds and especially grass away from new trees and shrubs. Apply a 2–4" mulch of composted material—leaves, wood chips or hay—out as far as the drip line. A 1/2–1" topdressing of alfalfa meal beneath the mulch may substantially reduce transplant shock. Keep mulch back several inches from the tree trunk. We lay down cardboard or newspaper and spread mulch on top of it. Mulch encourages earthworms, holds moisture, keeps down weeds, insulates against excess heat and cold, aerates and loosens soils, builds humus and fertilizes feeder roots, 90% of which are within 6" of the surface.

Staking & Crooked Trees



Newly planted standard-sized and semi-dwarf fruit trees and ornamental trees seldom need staking. If your tree is in a very windy site or develops a leaning habit, staking may help. Dwarf apple trees do require staking. Drive a stout post near the tree. Wrap the tree trunk with a scrap of burlap or rubber to protect against abrasion. Secure the wrapped part of the tree to the post with string or wire. Tie tree somewhat loosely, as a slight rocking motion will encourage rooting. Once roots are well anchored, the stake may not be needed. Mark small trees with a stake with ribbons to warn operators of lawn mowers, tractors, cars and skidders.

Some tree varieties naturally tend to grow a little crooked (like Redfield apple!), and they won't grow straight not matter how much room we give them in the nursery. To mitigate this issue, you may try staking. You may also try planting the crooked tree so the roots are at a slight angle and the top is more upward-pointing, as if to split the difference. Most trees do not grow perfectly straight. Retraining your eye to appreciate a tree's unique form may be easier than fighting nature.

Spacing of Fruit Trees, Nut Trees & Berries

	between plants	between rows
Apples, Dwarf	7–15'	15'
Apples, Semi-dwarf	15'	15'
Apples, Standard	25–30'	25–30'
Asparagus	1–2'	4'
Blackberries	3–4'	6–12'
Blueberries, highbush	3–6'	8–10'
Blueberries, lowbush	1'	1'
Grapes	8'	8–10'
Hazel	4–6'	hedge
Nut trees - orchard	35'	35'
Nut trees - forest	20'	20'
Pears, Asian Pears	20'	20'
Raspberries	2'	6–12'
Stone Fruit	15–20'	15–20'
Strawberries	see instructions, p. 25	
Sweet Cherries	25'	25'

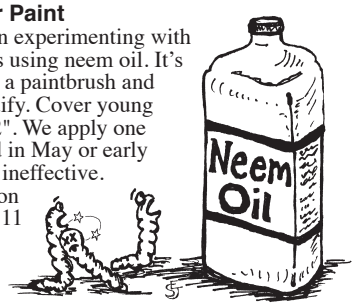
Beware the Apple Borer!

In many parts of central and northern New England the roundheaded appletree borer, *Saperda candida*, is the number one enemy of young apple, crabapple and quince trees. If you are growing young apple trees in these locations, you must protect your trees from this pest. Farther south and north the borer may not be a pest. If you don't know if they are a problem in your area, check with any grower near you: they'll know. Otherwise, err on the side of caution. Also feeds on other members of the rose family, such as pear, hawthorn and Amelanchier.

Borer beetles lay eggs under the bark near the base of the tree. The developing larvae tunnel through the wood, eventually weakening the tree until it falls over. The trouble sign is small deposits of orange sawdust, called frass, at the base of the tree. Check lower trunks for frass and tunneling in late May, and again in September. Left unchecked, borers usually mean death for young trees.

Here are our strategies for controlling borers:

Coat the trunks with Neem or Paint



• **With Neem Oil** We have been experimenting with several methods for treating borers using neem oil. It's easy and effective. All you need is a paintbrush and undiluted neem oil warmed to liquify. Cover young tree trunks from the soil line up 12". We apply one time only around July 1. If applied in May or early June, the neem dries and becomes ineffective. We have noticed some sensitivity on the adventitious root bumps of M111 and are currently experimenting with diluted neem formulas in our local nurseries and at the Maine Heritage Orchard. These experiments include spraying a 2% neem solution on clonal rootstocks as well as different blends of neem, Surround (clay powder), and powdered milk paint. We hope to have results from these trials by our next catalog!

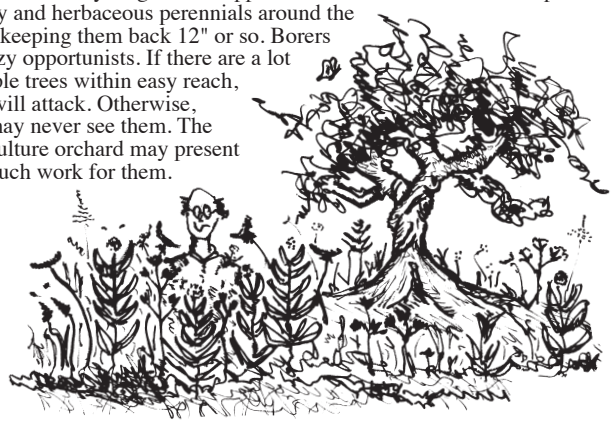
• **With Paint** After neem oil, paint is likely the best deterrent. It's easy and requires no hard-to-find ingredients. Do not apply paint until trees have been in the ground for 3–5 years. Until then, be sure to continue monitoring them for signs of borer.

Recipe: Mix white interior latex paint with joint compound. (The stuff you smear on sheet rock joints and nail holes—you can buy a small tub at any hardware store. Some exterior paint formulations contain ingredients that can harm the tree's phloem.) The consistency should be thick but still quite easy to paint, not glob on. Repaint as needed. This mix will help deter borers and also make detection of infestations easier. Once you locate a borer hole, you'll have to cut or blast it out (see below). Look for the orange frass!

Cut It Out Once you've identified a hole or soft spot in the trunk, insert a wire and dig around until you locate and kill the larva. Cut away soft spongy pockets with a knife. Even serious carving is less harmful to the tree than leaving the larvae alive inside.

Blasted Borers When you discover a soft spot or hole in the tree, get yourself a can of compressed air (for cleaning computers). Put the long skinny tube nozzle up to the hole and give it a blast. Should do the trick.

The Polyculture Deterrent Borer beetles thrive in shady moist warm environments. Keep grass back at least 6" from the tree base. Trials in our "functional" orchard suggest that a mixed polyculture environment may disguise the apple trees and fool the borers. We plant woody and herbaceous perennials around the trees, keeping them back 12" or so. Borers are lazy opportunists. If there are a lot of apple trees within easy reach, they will attack. Otherwise, you may never see them. The polyculture orchard may present too much work for them.



Scab in the apple orchard

Apple scab (*Venturia unaequalis*) is the most challenging disease for the New England apple grower. Scab is a fungus, spread by spores that overwinter in fallen fruit and leaf litter, rising up in rainy spring weather to cause grief all over again. It appears as small rough black patches on the fruit or foliage. A bit of scab is not a bad thing. It won't hurt you or your tree or fruit. Some growers actually believe that a small amount of scab triggers a beneficial self-protection response in the apple. But a lot of scab can destroy the fruit and even kill the tree. Severity of infection can vary depending on the year, the site, and the variety.

With organic or conventional fungicides as a last resort, what can you do to avoid or minimize scab damage in your trees?

• **Avoid susceptible varieties.** Although nearly all apples are susceptible to some extent, certain varieties are especially vulnerable to scab. In particular, McIntosh and its relatives are scab magnets. These include Cortland, Fameuse and Macoun. If you grow these apples, you'll probably struggle with scab in your orchard. If you can avoid these varieties, you may be able to keep scab to a tolerable level without spraying fungicides. Most heirlooms are susceptible but should be quite tolerant as long as highly susceptible varieties are kept away.

In 1945, Purdue, Rutgers and the University of Illinois began a collaboration to develop scab-immune varieties. Many of these have PRI in their names. (Prima, Pristine, Williams Pride, etc.) They bred the varieties using *Malus floribunda* as a parent. It contains a gene that imparts scab immunity to the fruit. By crossing and recrossing, they were able to isolate and include this gene in the final introduction. We've offered some of these varieties, including GoldRush from the PRI program, and Liberty from the associated New York breeding program. If you like the fruit from these varieties, growing them can be a good strategy for avoiding scab.

• **Thin the fruit.** In late spring or early summer, we thin all our tree fruit, remove enough fruitlets that the mature fruits won't touch. You want air circulation. Insects also like those places where fruits rub against each other.

• **Clean up drops and fallen leaves.** Scab lives in the drops (fallen fruit), as do insects. Eat the drops, make them into cider, feed them to your livestock or compost them. Some farmers let livestock in the orchard to eat the drops. Also rake up leaves in the fall. Burn, compost or mow them. By practicing good hygiene in the orchard, some growers have been able to grow good McIntosh organically.

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- Fruition Mix for fertilizing established fruit trees
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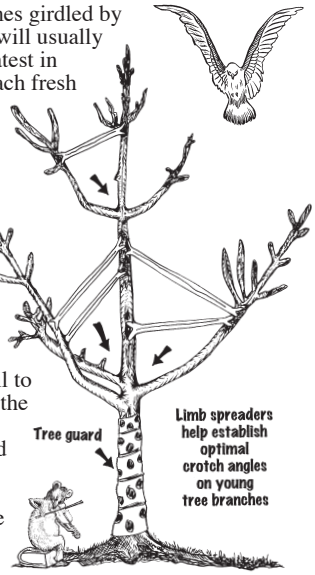
Protecting Trees from Mice and Voles



Fruit trees and ornamentals are sometimes girdled by mice or voles eating the bark. Girdling will usually kill the tree or shrub. The danger is greatest in winter. Stomp around the trunks after each fresh snowfall to create a packed-ice barrier that will prevent mice from traveling beneath the snow. Keep the grass mowed in the fall and remove large mulch piles from near the trunks. Rodents like to nest in hay more than in chip mulches. A wrap of hardware cloth or a plastic spiral tree guard will protect your tree from being girdled.

If you use screening or plastic spiral tree guards on apple, quince or crabapple trees, remove them from April to October, as they attract borers if left on the tree in the summer.

Our trials show that a mulch of wood chips surrounding young trees greatly reduces the chance of summer vole damage. Tall grasses invite them in. The polyculture model may provide cover for the voles and can result in summer vole damage. So keep the tall perennials back about 12" from the tree.

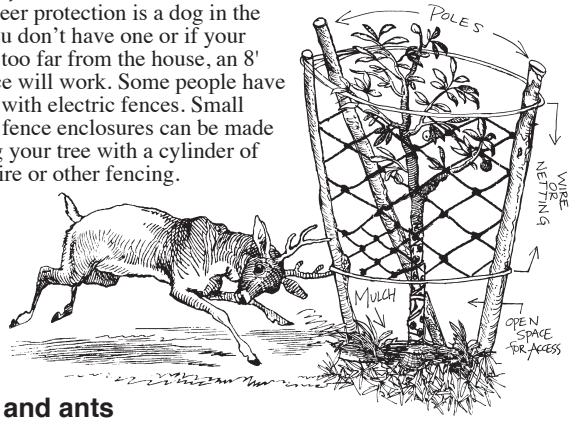
Also, make your orchard hawk friendly.

Voles Don't Like Narcissus!

For many years we've been planting daffodils around the base of some of our apple trees. No particular reason; it just looks great. Come to find out that you can beautify your orchard and deter voles at the same time. Plant daffodils in a circle a foot or two away from the base. The tunneling voles don't like the bulbs and will veer away.

We don't have the super-destructive pine voles in our orchard—whether or not the bulbs would deter them, we don't know.

Oh Dear, Deer!



The best deer protection is a dog in the yard. If you don't have one or if your orchard is too far from the house, an 8' sheep fence will work. Some people have good luck with electric fences. Small protective fence enclosures can be made by circling your tree with a cylinder of chicken wire or other fencing.

Aphids and ants

Aphids can do a lot of damage to apple trees and they make the young leaves look gross. Whenever you see aphids you will see ants climbing up and down the tree feeding them. Here's an easy solution. Wrap a piece of stiff paper about 6" wide around the trunk about a foot or two off the ground. Tape this sleeve to itself but not to the tree. Smear Tanglefoot (available in our **Seeds & Supplies catalog**) on the paper. Ants will not cross the barrier and, without the ants, the aphids will die. In a day or two no more aphids.

Caterpillars

Most caterpillars will not damage healthy plants and are important members of the environment. However, a few kinds, such as tent caterpillars, are extremely destructive to fruit trees. You'll know when you see them—they hatch in large crowds and rapidly defoliate plants. Vigilant daily observation, manual collection and disposal are necessary from mid-summer to fall. Be careful handling browntail moth caterpillars (see page 19). They can cause a severe rash.

Tools and books are in our Fedco Seeds & Supplies catalog, or at fedcoseeds.com/ogs

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Interested in drawing for us?
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Index

	Page
Abies	33
Acer spp.	31, 40
Achillea	55, 63
Aconitum	55
Acorus	63
Actaea	63
Agri-gel	33
Alcea spp.	55
Allium	56, 64
Althaea	64
Amelanchier spp.	40
Amsonia	56
Apios	29
Aquilegia	56
Armeria	56
Apple	4-17, 44
Arborvitae	33
Arctostaphylos	51
Arisaema	56
Armoracia	53
Arnica	64
Aronia spp.	40
Artemisia	64
Asarum	56
Asclepias	56
Asian Pear	20
Asparagus	53
Aster	63
Astragalus	64
Baptisia	57
Bayberry	45
Beach Plum	46
Bearberry	51
Beardtongue	62
Bee Balm	65
Bellflower	57
Berries	24-27
Betula	31
Birch	31
Blackberry	27
Black Cohosh	63
Black Haw	51
Black Raspberry	27
Black Walnut	30
Blazing Star	60
Bleeding Heart	57
Blueberry	24
Blue Flag	60
Bluestar	56
Boneset	64
Book	14
Bulbs	66
Bunchberry	57
Butterfly Weed	56
Butternut	30
Buttonbush	40
Calluna	51
Calycanthus	40
Campanula	57
Cane Fruits	26-27
Carolina Allspice	40
Carpinus	31
Castanea	30
Catalpa	31
Catmint	60
Cedar	33
Celtis	31
Cephalanthus	40
Cercis	41
Chelone	57
Cherry, Cornelian	41
Cherry, Nanking	46
Cherry, Pie	21
Cherry, Sweet	20
Chestnut	30
Chive	64
Chokeberry	40
Cider Apple	16-17
Clethra	41
Collections	
Cider Apple	17
Crabapple	44
Grape	28
Heirloom Apple	15
Lingonberry	52
Columbine	56
Comfrey	63, 66
Coneflower	64
Conifers	33
Coreopsis	57
Cornelian Cherry	41
Cornus spp.	41, 57
Corylus	30
Cotinus spp.	42
Crabapple	44
Cranberry	52
Cranesbill	58
Crocosmia	66
Culver's Root	62
Cydonia	42
Dawn Redwood	33
Daylily	59
Delphinium	57
Dicentra	57
Diervilla	43
Digitalis	57
Dogwood	41
Echinacea	64
Elderberry	48-49
Elm	32
Erica	51
Eupatorium	64
Eutrochium	57
Evergreens	33
False Indigo, Blue	57
Ferns	58
Filbert	30
Fir	33
Forsythia	43
Foxglove	57
Fragaria	25
Garden Roots	53
Gaultheria	52
Gaylussacia	43
Geranium spp.	58
Ginger, Canadian Wild	56
Gladiolus	66
Glycyrrhiza	65
Goldenrod, Stiff	60
Grape	27-28
Groundcovers	51-52
Groundnut	29
Hackberry	31
Hamamelis	43
Hazelnut	30
Heather	51
Helenium	59
Hemerocallis	59
Hens & Chicks	62
Hollyhock	55
Honeysuckle	29
Honeysuckle, Bush	43
Hophornbeam	31
Hops	29
Horseradish	53
Hosta	59
Huckleberry	43
Humulus	29
Hydrangea	43
Ilex	43
Iris	59-60
Jack-in-the-Pulpit	56
Joe Pye Weed	57
Juglans spp.	30
Juneberry	40
Lavender	65
Lemon Balm	65
Leucanthemum	60
Levisticum	65
Liatris	60
Licorice	65
Lilac	50
Lily	60
Linden	32
Lindera	43
Lingonberry	52
Lonicera	29
Lovage	65
Lungwort	62
Malus	4-17, 44
Maple	31, 40
Marshmallow	64
Medicinal Plants	63-66
Melissa	65
Mentha	65
Metasequoia	33
Milkweed	56
Mint, Chocolate	65
Mint, Mountain	65
Mockorange	45
Monarda spp.	65
Monkshood	55
Morus	45
Mulberry	45
Musclewood	31
Mushrooms	54
Myrica	45
Nannyberry	51
Nepeta	60
Nuts	30
Oak	32
Oligoneuron	60
Onion, Flowering	56
Oregano	65
Ostrya	31
Pasque Flower	62
Peach	21
Pear	18-20
Penstemon	62
Peony	61
Perennial Plants	55-66
Perovskia	62
Philadelphus	45
Phlox	62
Picea spp.	33
Pine	33
Plum	22-23
Plum, Beach	46
Pruning	42, 68
Prunus	20-23, 46
Pulmonaria	62
Pulsatilla	62
Pussy Willow	48
Pycanthemum	65
Pyrus	18-20
Quercus spp.	32
Quince	42
Raspberry	26
Redbud	41
Redosier	41
Rheum	53
Rhubarb	53
Rhus	46
Rootstock	5, 38-39
Rose	46-47
Rubus	26-27
Rudbeckia	62
Sage, Russian	62
Salix spp.	32, 48
Sambucus spp.	48-49
Scionwood	38-39
Sea Thrift	56
Sempervivum	62
Serviceberry	40
Shadbush	40
Shade Trees	31-32
Shasta Daisy	60
Smokebush	42
Smoketree	42
Sneezeweed	59
Spicebush	43
Spiderwort	63
Spiraea	49
Spruce	33
Steeplebush	49
Stewardship Apple	14
Stinging Nettle	66
Stone Fruit	20-23
Strawberry	25
Sugar Maple	31
Sumac	46
Summersweet	41
Sweetflag	63
Sword Lily	66
Symphyotrichum	63
Symphytum spp.	63, 66
Syringa spp.	50
Thuja	33
Thyme	66
Tiger Lily	60
Tilia	32
Tools	54
Tradescantia	63
Turtlehead	56
Ulmus	32
Urtica	66
Vaccinium spp.	24, 52
Verbena	66
Veronicastrum	63
Vervain	66
Viburnum spp.	51
Vines	27-29
Vitis	27-28
Walnut	30
Wild Bergamot	65
Wild Raisin, Northern	51
Willow	32, 48
Winterberry	43
Wintergreen	52
Witch Hazel	43
Wormwood	64
Yarrow	55, 63
Order Info	**34**
Order Forms	**35-38**

USDA Hardiness Zone	Average Minimum Temperature
2	-50° to -40°
3	-40° to -30°
4	-30° to -20°
5	-20° to -10°
6	-10° to 0°

Fedco Trees
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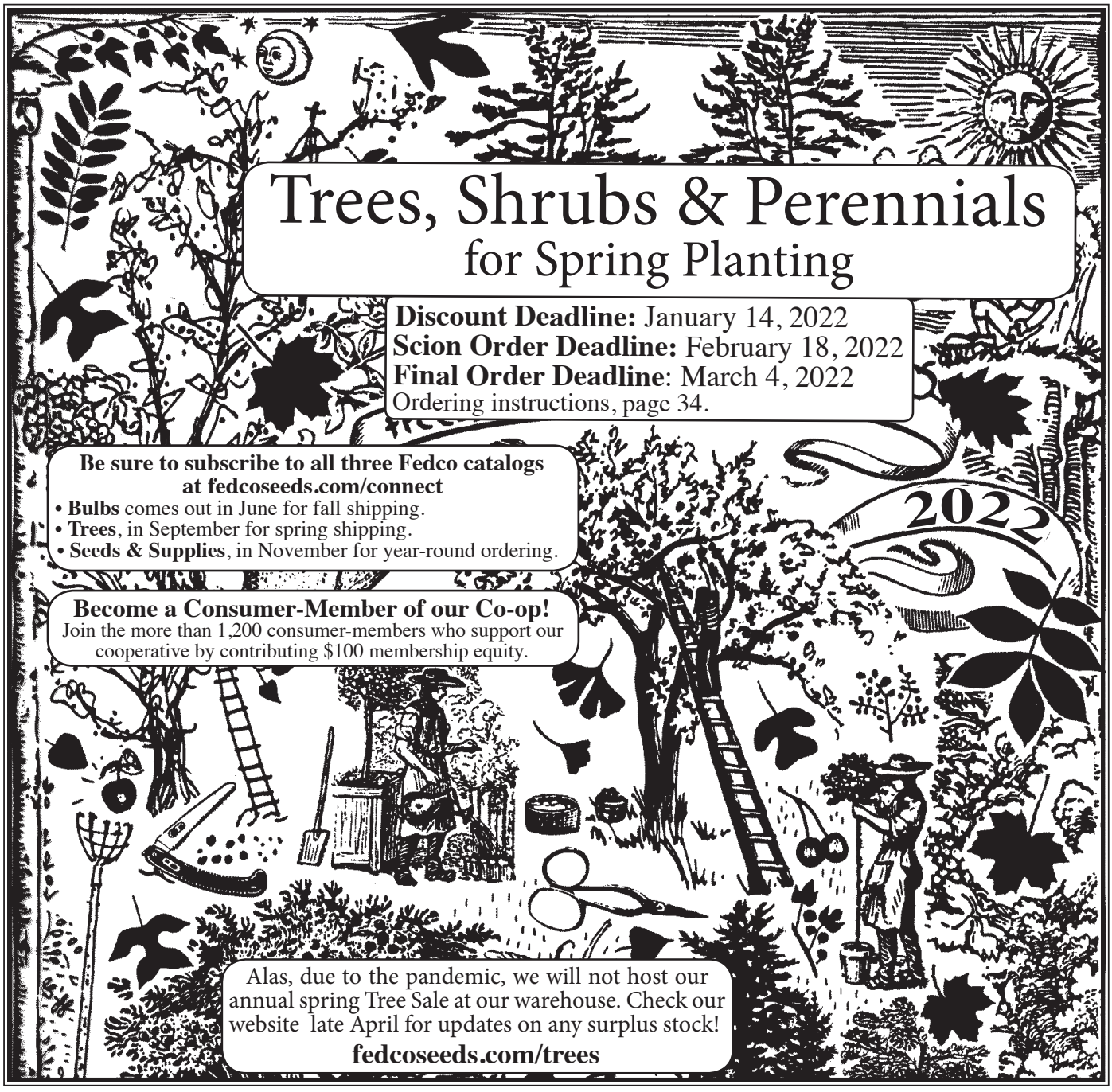

Trees, Shrubs & Perennials
for Spring Planting

Discount Deadline: January 14, 2022
Scion Order Deadline: February 18, 2022
Final Order Deadline: March 4, 2022
Ordering instructions, page 34.

Be sure to subscribe to all three Fedco catalogs at fedcoseeds.com/connect
- **Bulbs** comes out in June for fall shipping.
- **Trees**, in September for spring shipping.
- **Seeds & Supplies**, in November for year-round ordering.

Become a Consumer-Member of our Co-op!
Join the more than 1,200 consumer-members who support our cooperative by contributing $100 membership equity.

2022

Alas, due to the pandemic, we will not host our annual spring Tree Sale at our warehouse. Check our website late April for updates on any surplus stock!
fedcoseeds.com/trees